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MILLS, LARRY WARD  
A RESEARCH STUDY OF JOB SATISFACTION AND  
CENTRAL LIFE INTEREST AMONG SMALL BUSINESS  
EMPLOYEES IN CENTRAL OKLAHOMA.

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THE UNIVERSITY OF OKLAHOMA  
GRADUATE COLLEGE

A RESEARCH STUDY OF JOB SATISFACTION AND CENTRAL LIFE INTEREST  
AMONG SMALL BUSINESS EMPLOYEES IN CENTRAL OKLAHOMA

A DISSERTATION  
SUBMITTED TO THE GRADUATE FACULTY  
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for the degree of  
DOCTOR OF PHILOSOPHY

BY  
LARRY W. MILLS  
Norman, Oklahoma

1978

A RESEARCH STUDY OF JOB SATISFACTION AND CENTRAL LIFE INTEREST  
AMONG SMALL BUSINESS EMPLOYEES IN CENTRAL OKLAHOMA

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A RESEARCH STUDY OF JOB SATISFACTION AND CENTRAL  
LIFE INTEREST AMONG SMALL BUSINESS  
EMPLOYEES IN CENTRAL OKLAHOMA

CHAPTER I

BACKGROUND OF THE PRESENT STUDY

Introduction

Small business is important to America! "The significance of small business has not diminished. Alongside the giants that get the business headlines are more than 9 million men and women who quietly account for nearly one-half of the country's production, more than one-half of its business jobs, and represents livelihood directly and indirectly for one-half of our population" (SBA Fiscal Year 1974 Report, 1974, p. 3). Tate states, "...there are 5.7 million small businesses making up 95 percent of all business units" (1975, p. 4). The director of purchasing for Chrysler Corporation said in 1971, "My company bought goods and services from over 20,000 companies, 70 percent of whom employ fewer than 100 employees" (Baumback, 1973, p. 12). Statistics present a picture of the extreme importance of



small business to the "American way of life."

Though the statistical case for small business importance looks strong, that importance seemingly has not spurred on a proportionate interest in the research field. A particularly neglected research area seems to be behavioral science research on small business employees. The tremendous acceleration of behavioral science research in the last three decades has provided invaluable psychological and sociological input to management of the work organization. The bulk of this input stems from the research in large organizations.

Exemplifying this, Schabaker has edited a Small Business Information Sources which contains a chapter on "Research Studies on Small Business." Eighty-one studies are listed; only five relate to personnel while none involve a measurement of employees' job satisfaction or their interest in work by use of a widely accepted instrument. A search of the Journal of Small Business Management over its 14 year life reveals 32 articles related to labor-personnel, again none measuring employee job satisfaction or interest in work by widely accepted instruments. The DATRIX computer dissertation search reveals only three dissertation titles in response to the selector words "small business." However, none deal with the beforementioned areas.

The importance of personnel problems in the small business environment were pinpointed by a recent President's

Task Force on Small Business which commissioned Dun and Bradstreet to survey the small business community. Their findings revealed, "Of all problems, those related to personnel tend to be the most frequently mentioned; over one-third (34.6 percent) of the respondents mentioned this problem first" (President's Task Force on Improving the Prospects of Small Business, 1970). The author of this thesis conducted a survey in 1975 among the small businesses in Bethany (Oklahoma) and found a very similar condition. The survey revealed that among twelve basic problems faced by small business owners, personnel was listed as the most important by a majority of those responding. In follow-up interviews, the concern with personnel stemmed from turnover problems, motivation, and recruitment problems. Much speculation has been and can be done on the causes for personnel problems in the small business community, but increased scientific inquiry seems the most plausible path toward solving the continuing problems.

-- An important part of personnel problems in small business lies in the basic ingredient - the individual. A better understanding of that individual should help provide a basis for solution to the cause of personnel problems rather than ill-fated attempts based on identifying and describing symptoms. Dostoyevsky said, "If it were desired to reduce a man to nothing, it would be necessary only to give his work a character of uselessness" (1915, p. 20).

A starting point in better understanding the small business employee is to borrow methodology from the behavioral science field for answering the questions, "What is the meaning of work to the small business employee?" Of what interest does work possess for the small business employee?

### Central Life Interest

Sociologist Robert Dubin has developed the concept of Central Life Interest (CLI), together with a questionnaire, to find the answer to this question. Dubin defines central life interest as "the expressed preference for a given locale or situation in carrying out an activity" (1956, p. 134). The objective of Dubin's CLI concept is to establish whether the worker's CLI is job-oriented or non-job-oriented. He makes clear that workers who are non-job-oriented and thus not strongly committed to their work can still be effective performers. However, the behavioral approach to the non-job-oriented should be based on different assumptions pertaining to what is of primary interest to the workers. Dubin postulates that possibly many human relations and human resource techniques are doomed for failure if the worker's central interest lies away from the workplace.

From the CLI's initial publication date in 1956, the questionnaire has been used in some 20 different studies. The use cuts across geographic, as well as, occupational lines. The original study by Dubin found that 76% of

the industrial workers surveyed were non-job-oriented (1956, p. 131). The study was done among 491 workers in three Midwestern plants. In an attempt to further explain non-job-orientation, Dubin sub-divided the questionnaire into four areas: informal group experience, general experience, organizational experience, and technological aspects. These terms will be defined in Chapter II. In the original study Dubin found 9% job-oriented as to informal experiences, 15% job-oriented as to general experience, 61% job-oriented as to organizational experience, and 63% job-oriented as to technological aspects (1956, pp. 135-138). In a follow-up study with German industrial workers, Dubin found percentages in the same general pattern, but not as strongly non-job-oriented (Dubin, 1965).

Dubin concluded from these two studies that, for the samples involved, overall central life interest and primary social relationships are centered away from the workplace, while technological aspects and organizational experiences are centered in one's workplace for the majority of workers. Understanding the disposition of workers toward their interest in work seems to this author to create outstanding possibilities for answering the question, "Where is the worker 'coming from'--to use the current vernacular--as related to work orientation?" Coupling this with "Where the worker 'is now' (job satisfaction)," should provide insights in helping to answer, "How do we get the workers to where they and the

organization would like them to be?" It seems obvious that if small business management can help employees get where they, the employees, want to be, personnel problems, such as turnover or motivation, may be reduced due to a better informed management. Dubin's CLI provides an answer to where the employee is "coming from." Job satisfaction provides a possible explanation to where the employee "is now."

### Job Satisfaction

A very contemporary and popular research topic is job satisfaction. A U.S. Department of Labor publication quotes Locke as saying, "Three thousand three hundred and fifty articles, books, and dissertations have now been published on job satisfaction" (U.S. Department of Labor, 1974). The extreme amount of activity in this topical area suggests a grasping for more knowledge about where workers stand in their attitudes toward work.

Patricia Smith summarizes the values of job satisfaction in the following manner:

1. Measures of job satisfaction can be taken as one of the criteria or standards by which to judge the success of management policies and practices.
2. Job satisfaction might be used to predict future absences and turnover among personnel.
3. Job satisfaction measures are a precondition for the testing of various general theories of attitudes and motivation and theories specifically concerned with the factors which produce satisfaction and the factors correlated with it--community, company, and individual characteristics.

4. One might simply be interested in knowing what percent of the population are satisfied and what percent are dissatisfied with their jobs; either as something of interest in itself, or for purposes of group or cross-cultural comparisons, or to plot trends over time. (Fleishman, et al., 1974, p. 273).

Much of the controversy relating to the concept of job satisfaction has stemmed from a definition of job satisfaction that explained it in a "broad attitudinal sense" as contrasted to other definitions that view job satisfaction as "need deprivation" (Schwab and Cummings, 1970, p. 422). Peak has highlighted this problem when she stated, "an object could be positively valent in an attitudinal sense while simultaneously deficient in a need sense" (1955, pp. 149-159). Peak was referring to the fact that a person might respond positively to overall job satisfaction while expressing a negative response to a specific job facet.

### Measuring Job Satisfaction

Four different types of measurement devices have been widely used over the past 25 years. Brayfield and Rothe developed a widely accepted instrument in 1951 (Brayfield and Rothe, 1951). The instrument is an 18-item questionnaire using a 5-point Likert-type scale. Questions such as the following were asked:

1. There are some conditions concerning my job that could be improved.
2. Most of the time I have to force myself to go to work.
3. I like my job better than the average worker does.

The Brayfield-Rothe index is a general attitudinal measurement.

A second instrument, the General Motors Faces Scale, was developed by Kunin (Kunin, 1955). This device was developed as a part of the Employee Research Center of General Motors to overcome the problem of inaccurate employee response to satisfaction questionnaires due to the inability to verbalize. A "general attitudinal" questionnaire, similar to the Brayfield/Rothe, was developed, but instead of choosing the appropriate words to indicate his answer, the respondent checked a one of five "faces" that best depicted his feelings; the faces ran the gamut from happy to sad.

A third highly-used device was developed by Porter (Porter, 1968b). The Porter questionnaire asked 13 questions, such as:

1. The opportunity for independent thought and action in my position:
  - a. How much is there now?  
(min) 1 2 3 4 5 6 7 (max)
  - b. How much should there be?  
(min) 1 2 3 4 5 6 7 (max)
2. The opportunity to develop close friendships in my position:
  - a. How much is there now?  
(min) 1 2 3 4 5 6 7 (max)
  - b. How much should there be?  
(min) 1 2 3 4 5 6 7 (max)

These questions were categorized in the "need deprivation" areas of social, ego, esteem and self-actualization.

The fourth device, the one chosen to be used in this research effort, is the Job Description Index developed by Patricia Smith and associates at Cornell University (Smith, 1963).<sup>1</sup> The questionnaire was developed by obtaining data from approximately 2500 industrial workers in 21 plants. Through factor analysis, five dimensions of job satisfaction were determined as most significant: pay, promotion, co-worker, work itself, and supervision. In addition, information concerning sex, income, job tenure, education, prosperity, and a decrepitude index were compiled with extensive sampling.<sup>2</sup>

The JDI is a "need deprivation" measurement device using adjectives to express the respondents' attitude toward a particular dimension. For example, in the work dimension some of the adjectives are: fascinating, creative, tiresome, simple, and endless. With respect to each adjective the respondent uses a "Yes," "No," or "?" (that is, cannot decide) to indicate whether the word applies to that particular dimension of his or her job. Rather than an

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<sup>1</sup>The total development and validation of the JDI is found in The Measurement of Satisfaction in Work and Retirement: A Strategy for the Study of Attitudes (Smith, Kendall, and Hulin, 1969).

<sup>2</sup>This study will not use income, prosperity, or the decrepitude index. The reader is referred to the previously cited work of Smith, et al., for further information.



overall measurement in the attitudinal sense, this type of scale is aimed at isolating specific job dimensions.

In early development of the JDI, the questionnaires were administered to the same people three different times. The first time they responded based on their present job. The second time the respondents were asked to answer based on the best job he/she could think of or the best job he/she had ever had. The third time the respondents were asked to answer based on the worst job he/she could think of or had held. From these three responses it then became possible to score the questionnaires in four different ways:

1. Satisfaction could be inferred from the similarity of his/her responses when describing his/her present job with his/her best job.
2. Satisfaction could be inferred from dissimilarity of his/her responses when describing his/her present job and the worst job he/she had held.
3. Satisfaction could be inferred simultaneously from the similarity of his/her present job responses to his/her best job and their dissimilarity to his/her worst job responses.
4. Satisfaction could be inferred from direct, a priori scoring of the items under the assumption that most individuals would interpret the items in the same way and would see the same things as desirable and undesirable on a job. (Fleishman, et al., 1974, p. 275).

It was found that the a priori scoring of the JDI scales gave the best results. This conclusion was based on the fact that this method gave the clearest discrimination or independence. The JDI also correlated very highly with entirely different sets of measures which asked the

individuals to rate job satisfaction in his or her own words.

The choice of adjectives for the JDI was done in three steps. First, other inventories and common sense were used to gather 30 to 40 items for each of the 5 scales. Next, the items used equally frequently to describe both the "best" and the "worst" jobs were thrown out. Finally, the scales were given to several samples of employees and the scores divided into satisfied and dissatisfied. Proportional differences between the high and low halves were computed. Those items which showed clear distinction between satisfied and dissatisfied were kept. Each scale was given about one-half positive adjectives and one-half negative adjectives to prevent a high score from a natural tendency to say "yes".

Smith and her associates, in establishing reliability and validity of the JDI, found corrected split-half correlations of responses from 80 male employees in two different electronic plants to be .80 to .88. The average correlation between the different scales is approximately .37, which shows a great deal of discrimination (Fleishman et al., 1974, p. 278).

The JDI scales correlate highly with other measures of satisfaction, in the neighborhood of  $r = .70$ , as reported by Kendall (Kendall, 1963), and Locke (Locke et al., 1964, pp. 313-319). Roberts and Savage cite the JDI as "...the most carefully constructed job satisfaction instrument in use today" (1973, p. 86). Ivancevich and Donnelly have

lauded the JDI as "an enlightening effort to standardize measurement of satisfaction" (1968, p. 173). Vroom (1964) and Robinson, et al., (1969) both mention the high reliability and high quality of the JDI. On the basis of the extensive research effort in the development of the JDI, the general acceptance of this instrument in the academic world, and the availability of data for comparison, this present research will use the JDI.

The JDI was administered to over 900 people in 7 different organizations in its development (Fleishman, et al., 1974, p. 279). Although the JDI has been administered to over 2500 employees in 21 different companies in a variety of communities throughout the United States (Fleishman, et al., 1974, p. 229), this researcher finds no mention in the literature indicating that the JDI has been used in organizations specifically classified as small business. Consequently, this research effort is believed to be the first application of the JDI to the small business environment.

### Summary

Such small business research as has been completed suggests continuing and pressing personnel problems (i.e., turnover, motivation, and so on). Preconditions to solutions seems to this researcher to entail a more complete understanding of the sociological-psychological makeup of this group. Dubin has suggested the centrality of work is

of major importance in implementing effective management practice. Smith has proposed that job satisfaction can be taken as one criterion by which to judge the success of management policies and practices; she believes that the JDI also has use in predicting absences and turnovers and preconditions for testing other theories. The response of small business employees to Dubin's CLI and Smith's JDI were analyzed in this present research effort to find answers to the research questions set forth in the following section.

#### Research Questions

1. Is the workplace the central life interest for small business employees?
2. In a "need deprivation" sense, what is the state of job satisfaction among small business employees with respect to pay, co-workers, promotion, and work itself?
3. Is there a significant relationship between job satisfaction/job-orientation and job dissatisfaction/non-job-orientation?
4. What importance, if any, does sex play in central life interest and job satisfaction among small business employees?
5. What importance, if any, does age play in central life interest and job satisfaction among small business employees?
6. What importance, if any, does education play in

central life interest and job satisfaction among small business employees?

7. What importance, if any, does job tenure play in central life interest and job satisfaction among small business employees?

### Hypotheses

In order to provide answers to the research problems and achieve the objectives of this study, the following testable hypotheses have been developed:

Hypotheses related to Dubin's Central Life Interest Concept:

1. A significant proportion of employees surveyed will be classified as non-job-oriented when central life interest is measured with the CLI questionnaire.
2. A significant proportion of the employees surveyed will be non-job-oriented with respect specifically to informal group experiences, when measured on the relevant portion of the CLI questionnaire.
3. A significant proportion of employees surveyed will be non-job-oriented with respect to the general experience section of the CLI questionnaire.
4. A significant proportion of the employees will score job-oriented for their organizational experiences when measured on the organization section of the CLI questionnaire.
5. A significant proportion of the employees surveyed will be job-oriented with respect to the technological section of the CLI questionnaire.

Hypotheses related to Smith's Job Description Index:

6. A significant proportion of small business

employees surveyed will show satisfaction as related to the work section of the JDI questionnaire.

7. A significant proportion of small business employees surveyed will show dissatisfaction related to the pay section of the JDI questionnaire.
8. A significant proportion of small business employees surveyed will show dissatisfaction related to the promotion section of the JDI questionnaire.
9. A significant proportion of small business employees surveyed will show satisfaction related to the co-worker section of the JDI questionnaire.

Next, one hypothesis is related to the interrelationship of central life interest and job satisfaction findings:

10. A significant relationship exists between job-orientation and job satisfaction.

Finally, the twelve remaining hypotheses are related to selected demographic factors and their relevancy to central life interest, job satisfaction, and the interrelationship of central life interest/job satisfaction:

11. Males will score significantly higher than females in job satisfaction when measured by the JDI.
12. A significantly higher percentage of males, as compared to females, will be job-oriented when measured by the CLI.
13. Males will show significant difference from females in the interrelationship between central life interest and job satisfaction, namely, greater correlation between job-orientation/satisfaction.
14. Younger workers will score significantly higher than older workers in job satisfaction when measured by the JDI.

15. A significantly higher percentage of younger workers, as compared to older workers, will be job-oriented when measured by the CLI.
16. Younger workers will show significant difference from older workers in the interrelationship between central life interest and job satisfaction, namely, greater correlation between job-orientation/satisfaction.
17. Workers with more formal education will score significantly higher than workers with less formal education in job satisfaction when measured by the JDI.
18. A significantly higher percentage of workers with more formal education, as compared to workers with less, will be job-oriented when measured by the CLI.
19. Workers with more formal education will show significant difference from workers with less formal education in the interrelationship between central life interest and job satisfaction, namely, greater correlation between job-orientation/satisfaction.
20. Workers with shorter job tenure will score significantly higher than workers with longer job tenure in job satisfaction when measured by the JDI.
21. A significantly higher percentage of workers with shorter job tenure, as compared to longer job tenure, will be job-oriented when measured by the CLI.
22. Workers with shorter job tenure will show significant difference from workers with longer job tenure in the interrelationship between central life interest and job satisfaction, namely, greater correlation between job-oriented/satisfied and non-job-oriented/dissatisfied.

#### Expected Results

Research is carried on with a priori expectations, based on conceptual and analytical study of existing

knowledge. In an attempt to delineate existing research expectations, the following relationships are given:

1. Small business employees will be non-job-oriented in overall central life interest measurement. This would parallel Dubin's findings of 74% of industrial workers having non-job-oriented central life interest (Dubin, 1956, p. 135).
2. Small business employees will be non-job-oriented as measured by the informal group experience. Dubin's findings were that 91% of industrial workers are non-job-oriented in informal group experiences (Dubin, 1956, p. 136).
3. Small business employees will be non-job-oriented as measured by the general experience questions. In Dubin's study, 85% of industrial workers were non-job-oriented as measured by this section (Dubin, 1956, p. 136).
4. Small business employees will be job-oriented as measured by the organization experience questions. Dubin found 61% of industrial workers to be job-oriented with regard to organizational experience (Dubin, 1956, p. 137).
5. Small business employees will be non-job-oriented as measured by the technical experience questions. This differs from Dubin in that he found 63% were job-oriented (Dubin, 1956, p. 138). This divergence is expected due to the breadth of job descriptions in small business, but lack of job depth due to tight controls by the owner.
6. Small business employees will be satisfied with work itself as measured by the JDI. Smith findings: male mean raw score = 36.57; female mean raw score = 35.74; neutral point = 26<sup>3</sup> (Smith, et al., 1969, p. 80).
7. Small business employees will be dissatisfied with pay as measured by the JDI. Smith

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<sup>3</sup>Neutral points were determined by Smith and associates through empirically testing and equating JDI scores to a "Faces" scale (Smith, 1969, p. 81).



findings: male mean raw score = 29.9; female mean raw score = 27.9; neutral point = 22 (Smith, et al., 1969, p. 80).

8. Small business employees will be dissatisfied with promotion as measured by the JDI. Smith findings: male mean raw score = 22.06; female mean raw score = 17.7; neutral point = 20 (Smith, et al., 1969, p. 80).
9. Small business employees will be satisfied with co-workers as measured by the JDI. Smith findings: male mean raw score = 43.49; female mean raw score = 42.09; neutral point = 32 (Smith, et al., 1969, p. 80).
10. Small business employees will show a correlation between job-orientation and job satisfaction. Those expressing orientation to the workplace will attach job satisfaction to that orientation. Non-job-orientation is expected to be reflecting a sociological phenomenon of transferring central life interest out of the workplace to other interests, and correspondingly workers will associate the non-job-orientation with job dissatisfaction.
11. Small business employees will not show a significant difference in overall job satisfaction as related to the male/female variable. Although Hulin and Smith found women in production jobs to be less satisfied than men, they stated, "We do not maintain that sex per se is the critical factor which leads to either high or low satisfaction" (1964, p. 91).
12. Small business employees will not show significant differences in central life interest related to the male/female variables. (Dubin did not publish the CLI relationship pertaining to males/females).
13. Male small business employees will not show significant difference from female employees in the correlation between job-orientation/satisfaction. Dubin, Champoux and Stampfl reached this same general conclusion (1973, pp. 18-19).
14. Younger small business employees will be significantly less satisfied than older employees. This expected result concurs with the linear

model theory of, among others, Bernberg (1954), Vollmer and Kinney (1955), Hulin and Smith (1965), Wild (1970), Gibson and Klein (1970), Altimus and Tersine (1973), and Glenn, Taylor, and Weaver (1977).

15. Younger small business employees will show significantly more job orientation than older employees. Goldman, in a study of managers, found declining work orientation with age (1968, p. 123).
16. Younger small business employees will not show significant difference from older employees in the correlation between job-orientation/satisfaction. Based on the previous two expectations, younger workers being more dissatisfied and more job-oriented, the inference would be older employees more satisfied and more non-job-oriented, thus correlations should not be significantly different.
17. Small business employees with more formal education will be significantly less satisfied than employees with less formal education. The literature is mixed. The expectations of this researcher are based on the limitations with respect to pay, promotion, and the work itself commonly found in small businesses, that quite possibly might increase dissatisfaction of employees with more formal education. This result would concur with Scott and Hayes (1921), Mossin (1939), Centers and Cantril (1946), Neilson (1951), Mann (1953), Vollmer and Kinney (1955), and Klein and Maher (1966, 1968).
18. Small business employees with more formal education will show significantly less job-orientation than those employees with less formal education. Goldman's research shows no consistent relationship (1968, p. 134). The expectation of this researcher is based on employees with more formal education viewing the small business organization only instrumentally, seeing limitations on their future potential.
19. Small business employees with more formal education will show no significant difference from employees with less formal education in the correlation between job-orientation/satisfaction. The previous two expectations suggest the

employees with more education to be less satisfied and less job-oriented than those employees with less education. Thus, it follows that the correlation for those with less education, who are expectantly more satisfied and more job-oriented, should not be significantly different.

20. Small business employees with short job tenure will show significantly greater job dissatisfaction than those employees with longer tenure. The research of Cain (1942), Neilson (1951), Hulin (1966a), Hulin and Smith (1965), and Sheppard (1967) suggest a similar linear relationship between job tenure and job satisfaction.
21. Small business employees with short job tenure will show significantly greater job-orientation than employees with longer job tenure. This expectation would parallel the "age" expectation, in that, as workers increase in age they seek fulfillment outside the workplace.
22. Small business employees with shorter job tenure will show no significant difference from employees with longer tenure in the correlation between job-orientation/satisfaction.

#### Statistical Verification

The data of this research were analyzed by the use of the following statistical techniques: t-test, chi-square, analysis of variance, and the Goodman and Kruskal gamma coefficient. These techniques follow the procedures of other studies.

The hypotheses related to Dubin's central life interest ( $H_1$ - $H_5$ ) were analyzed by testing the hypotheses against  $p = \frac{1}{2}$  to see if there was significance in job-orientation or non-job-orientation. The results were analyzed based on Dubin's overall CLI orientation as well as the CLI orientation for each of four sections: informal

experience, general experience, organizational experience, and technical experience. These results give the small business employees' orientation to work.

It will be recalled that Dubin's original research (1956) involved industrial workers. The results of this study (in  $H_1-H_5$ ) are compared to Dubin's findings. Dubin revised his scoring method (in 1973) and the results of this study, based on that scoring method are also presented below.

The hypotheses related to Smith's JDI ( $H_6-H_9$ ) were subjected to testing of the hypothesis against  $p \leq \frac{1}{2}$  and t-tests. The results of the small business employees' responses to the JDI were analyzed by testing the hypothesis to establish significant job satisfaction or dissatisfaction. This was followed by the use of t-test to examine significant job satisfaction or dissatisfaction. This was followed by the use of t-test to examine significant difference of means between small business employees; mean JDI scores and Smith's mean scores in norming studies.

The non-parametric Goodman and Kruskal gamma coefficient (1954) was used to test the hypothesis ( $H_{10}$ ) related to the interrelation between job-orientation and job satisfaction. The gamma coefficient is a measure of association of populations which are cross-classified. The result of this analysis was to establish whether the job-oriented employee was also the satisfied employee.

The next group of hypotheses ( $H_{11}$ - $H_{22}$ ) deal with four selected demographic factors: sex, age, education, and job tenure. For each of the four demographic areas hypotheses were developed to test job satisfaction results, central life interest results, and the interrelationships by the demographic factor categories. Analysis of variance was used to test JDI results with each demographic variable. Chi-square was used in testing CLI results with each demographic variable. Finally, point biserial correlation was used with correlations tested for significant difference from zero, to analyze interrelationship between job-orientation and satisfaction. Point-by-point correlation was precluded from use because Dubin's scoring method did not establish a numerical value, only a category. Thus, the point biserial correlation allowed for the use of JDI raw scores, rather than categories, which allowed for the intensity of satisfaction or dissatisfaction to remain in the analysis (i.e., a score of 40 in the co-worker section would show stronger satisfaction than a score of 36, although both would be in the "satisfied" category).

Further discussion of the data analysis will be deferred until Chapter V.

### Limitations

Each research effort possesses limitations, regardless of the effort made to minimize their presence. Four specific limitations appear evident to this researcher.

1. This study assumes the respondents have truthfully reflected their feelings. Any attitudinal sampling possesses possibilities that such truthfulness might not occur.

Anonymity for the respondent was proclaimed and protected in this research to minimize the threat of outside consequences which would distort the responses.

2. The research was conducted in small businesses located within two contiguous communities of central Oklahoma.

3. The research was conducted in predominately retail and service small businesses and therefore, cannot be construed as representative of all types of small businesses.

4. The CLI questionnaire and the JDI questionnaire were presented to each respondent as two separate documents, but in the same envelope. The order in which the respondent answered the questionnaires was his or her choice. Thus, bias could result from the sequence. The conclusions of this thesis are subject to the above mentioned limitations.

#### Contributions of this Research Effort

This research effort is intended to provide insights for the owner/managers of small businesses and for their employees, to corroborate past research, and to suggest possible future research.

The owner/manager of each small business who

cooperated in the data collection for this study has received a synopsis of the research results with the expressed desire of this researcher to aid in his entrepreneurship by providing:

1. Knowledge of whether primary relationships among employees are on the job or in the non-job area.
2. Feedback to aid in managerial policy making.
3. Implications as to the central life interests and job satisfaction of small business employees that might be useful in the personnel areas of selection, training, and retention.
4. Possible implications for turnover problems.
5. Knowledge of whether employees' focal point of interest is job or non-job, to help shape philosophy toward increasing employee self-actualization.
6. An overall measure of satisfaction and central life interest to be compared to other populations.

The small business employee might gain the following from this research:

1. The realization that he/she is important enough for research to be pursued in his/her direction.
2. Knowledge that management has received input on employee attitudes and interest.
3. Forced evaluation of satisfaction and interest that could lead the employee to positive thoughts about his/her own growth and development.

This research effort should provide for the researcher who is interested in job satisfaction and central life interest of employees, and of employees in small business in particular:

1. Added empirical data in the area of job satisfaction by using a standardized measurement device relating to specific satisfaction measurements.

2. Added research data from the arena of small business to complement the data that have been obtained in the larger organization environment.

3. Added empirical data to the sociological phenomena of the locus of workers' central life interest by adding small business employees.

4. Additional data as to whether significant association exists between job satisfaction and central life interest in small business employees.

5. A pioneer research effort in the area of job satisfaction and central life interest among small business employees so that future researchers may replicate the study and add to the understanding of the behavioral makeup of the small business environment.

6. A data base which can be expanded to the study of other demographic factors among small business employees and the possible relevance of these factors to job satisfaction and central life interest.



## CHAPTER II

### REVIEW OF RELEVANT LITERATURE ON SMALL BUSINESS AND CENTRAL LIFE INTEREST

In this chapter, the relevant literature will be reviewed related to the personnel aspects of small business management, and the concept of "central life interest." In quest of added knowledge to help small business survive during what appear to be increasingly difficult times, this research effort attempts to address job satisfaction and central life interest of the small business employees in the belief that better understanding of employee attitudes will contribute to better personnel management. The job satisfaction topic will be covered in Chapter III.

This chapter will begin with a definition of "small business" followed by a review of the importance of small business to the American economy; this review will conclude with a brief summary of the research pertaining to small business employees.

The second section of this chapter will be devoted to a review of Dubin's Central Life Interest (CLI) theory.

Dubin injected into the "human relations" and "human resource movements" in 1956, his findings that for 76% of the industrial workers, the work place was no longer a central life interest. The implications were heavy if this were discovered to be a widespread phenomenon in a wide variety of jobs. The relevance for this research effort rests in the attempt to discover whether the personalized environment of small business attracts employee's with a job-oriented central life interest, or whether the organizations will be seen as a means to make an economic living. In a review of "central life interest," Dubin's two basic studies will be explored, other studies using the CLI will be reviewed, and criticisms of the CLI will be examined.

Our attention will now turn to a look at small business, to be followed by central life interest, and job satisfaction.

#### Small Business Definition

What constitutes "small business?" Two definitions are generally accepted by the authors of textbooks about small business management, namely Broom and Longnecker (1975), Baumbach, Lawyer and Kelley (1973), Steinmetz, Kline, and Stegall (1968), Sullivan (1977), and Tate, Megginson, Scott, and Trueblood (1975); these definitions have been formulated by the Committee on Economic Development (CED) and the Small Business Administration (SBA).

The Committee on Economic Development in 1947 was one of the first organizations to derive a widely accepted definition of the small business community. The CED approach was based on qualitative characteristics. These characteristics are:

1. Management is independent.
2. Capital is supplied and ownership is held by an individual or a small group.
3. The area of operation is mainly local. Workers and owners are in one home community. Markets need not be local.
4. The business is small when compared to the biggest units in its field. The size of the top bracket varies greatly, so what might seem large in one field would be definitely small in another. (Broom and Longnecker, 1975, p. 3).

The CED specifies that at least two of these characteristics need to be met for a firm to qualify as small business (CED, 1947, p. 14).

A second widely accepted definition is that of the Small Business Administration. The SBA uses a quantitative approach. For manufacturing firms, the number of employees is used. For retail, service, wholesalers, and contract construction, annual sales revenue is used as the basis for classifying. In summary form, the SBA definition (SBA Rules and Regulations, 1974, Section 121.3-10) is as follows:

<u>Industry</u> <sup>4</sup>	<u>Annual Sales Revenue</u>
Retail	2.0 - 7.5 million
Service	2.0 - 8.0 million
Wholesale	9.5 - 22.0 million
Contract Construction	5.0 million (average over 3 years)
	<u>Number of Employees</u>
Manufacturing	250 - 1500 employees

A combination of qualitative and quantitative criteria may be needed to give the best definition. The franchise of a national firm provides case in point. By quantitative definition of sales revenue or employees a small business may exist. However, store policy, administration, percent of sales, and so on may be controlled by absentee management. Thus, the qualitative definition of independent management would draw a more arbitrary line. In this research effort, the combination of the CED and SBA definition shall be used to place both quantitative and qualitative controls on the small business population.

Based on these conceptual definitions of small business, Davis stated, "Of 4.90 million ventures, 4.66 million are defined as small business. Looking to the future, by 1970 the number is expected to rise to 5.25

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<sup>4</sup>A detailed listing for practically all industries is spelled out in the "SBA Rules and Regulations," The Code of Federal Regulations.

million, and almost 5 million of these will be small businesses" (Davis, 1966, p. 5). Almost a decade later Tate said, "...there are 5.7 million small businesses making up 95% of all business units" (Tate, et al., 1975, p. 4). The significance of Davis' prediction, as backed up by Tate's report, is that the importance of small business to the American economy is a rather predictable factor. The next section will take a brief look at the importance of small business.

### Importance of Small Business

Webster says "important" implies "the power of influencing or the quality of having evident value either generally or in a particular relation and often by merely existing" (Webster's Seventh New Collegiate Dictionary, p. 419). Statistics related to the American economy show the "power of influencing" by the small business sector to be a very real factor. Webster's phrase, "by merely existing" has special application to the small business community when viewed as the roots from which the American capitalistic system stems.

The importance of small business can be seen in Table 2-1 which shows business enterprises categorized in terms of the number of employees. As can be seen from the table, 76% of the wholesale firms, 60% of the retail firms, 75% of the service firms, and 69% of the contract construction firms have less than 100 employees.

In figures released by the Small Business

TABLE 2-1  
SIZE OF FIRM

Sector	1-19	20-99	100-499	500+
Wholesale	40.7	35.2	16.2	8.0
Retail	39.4	20.8	7.6	32.2
Service	41.7	23.7	15.6	19.0
Contract Construction	38.9	29.9	17.6	13.5

SOURCE: U.S. Bureau of Census, Enterprise Statistics, 1967 - Part I - General Report on Industrial Organizations (Washington, D.C., U.S. Government Printing Office, 1972): Table 3-1.

Administration, "small business firms account for around 37% of our gross national product; 99% of the firms and 85% of the sales in contract construction; 96% of the firms and 72% of the sales in retail trade; 94% of the firms and 70% of the sales in wholesale trade; and 94% of the firms and 30% of the sales in manufacturing" (Tate, et al., 1975, pp. 4-5).

The U.S. Employment Service has estimated that "the average manufacturing firm in the U.S. has 60 employees, the average wholesale firm has 9 employees, the average retail firm has 4 employees, and the average service establishment has 2 employees (SBA, 1972, p. 42).

Siropolis states, "General Motors buys from 37,000 suppliers, most of whom are small. Why? Because big business cannot supply them as cheaply as small business" (1977, p. 12).

Another evidence of the importance of small business is the taxes paid. According to the U.S. Bureau of Census (1974), "small businesses accounted for 98% of the taxes paid by proprietorships, 69% of the taxes paid by partnerships, 45% of the taxes paid by sub-chapter S corporations, and approximately 10% of the taxes paid by corporations." Altogether, small businesses contributed about 20% of all business taxes paid.

An interesting way of viewing the importance of small business is through generation of creative talents. Records of the U.S. Patent Office show that between 1946-

1970, 31% of patents were issued to individuals, and 26% to small and medium sized business establishments (Baumbach, 1973, p. 13). Fifty-seven percent of patented new products are coming from small and medium-sized businesses or from individuals who quite possibly are outside the large corporate world.

Siropolis portrays the importance of small business through its strengths: "Small business will continue to hold its strong position in the economy, largely because of the following strengths:

1. Its ability to generate new ideas, new products, and new services.
2. Big business's increasing dependence on it for supplies, services, and raw materials.
3. Rising individualism among the young. More and more, business school graduates will prefer to work for themselves than for somebody else" (Siropolis, 1977, p. 13).

Moreover, small business possesses the ability to be flexible to meet the need of the day.

An oft overlooked point in small business prominence stems from the fact that most large businesses started small. A need arose in the market place, small businesses--being flexible and adaptable--met the need and did it so well they became big! Preservation and promotion of the small business community appears to be the best way to provide a spawning ground for "tomorrow's" giant.

The significance of small business was highlighted



by the establishing of the Small Business Administration in 1953. The mandate given this agency is stated in these words: "It is the declared policy of the Congress that the interests of small business concerns in order to preserve free competitive enterprise, to insure that a fair proportion of the total purchases for the government be placed with small business enterprises, and to maintain and strengthen the overall economy of the Nation" ("Small Business Administration - What is It, What It Does," 1954, p. 1). Through the past 24 years of existence, the SBA has become a mainstay in the small business community environment.

Many other government efforts have directed attention toward small business. The Nixon Administration appointed a Task Force to study the problems of small business. The Task Force solicited the services of Dun and Bradstreet to poll small business owners on their pressing problems. "Of all problems, those related to personnel tend to be the most frequently mentioned; over one-third (34.6%) of the respondents mentioned this problem first" (Opinion Survey of Businessmen's Problems," in "President's Task Force on Improving the Prospects of Small Business," March, 1970). In an unpublished research effort by this researcher, personnel problems were the most frequently cited problems in a survey conducted in Bethany (Oklahoma) small businesses in March, 1975. Although the small business owner must perform all functions of management, the personnel function

is an area of critical importance. This present research effort will add to knowledge by using "central life interest" and "job satisfaction" approaches (Chapters IV and V) in the study of the small business employee. The next section will survey the importance of personnel in the small business and research related to small business employees.

### Small Business Employees

Vital to success, and yet a predominant problem to the small business owner, is the personnel hired to make the small business organization operate profitably. In the report of the President's Task Force, cited earlier, were these highlights:

1. Personnel was the most serious problem given; 64% named personnel when shown a random list of 11 important business problems.
2. Eighty-one percent named shortage of qualified personnel as a major problem.
3. More than three times as many people quit their jobs as compared to those being dismissed from their jobs. (President's Task Force on Improving the Prospects of Small Business, March, 1970).

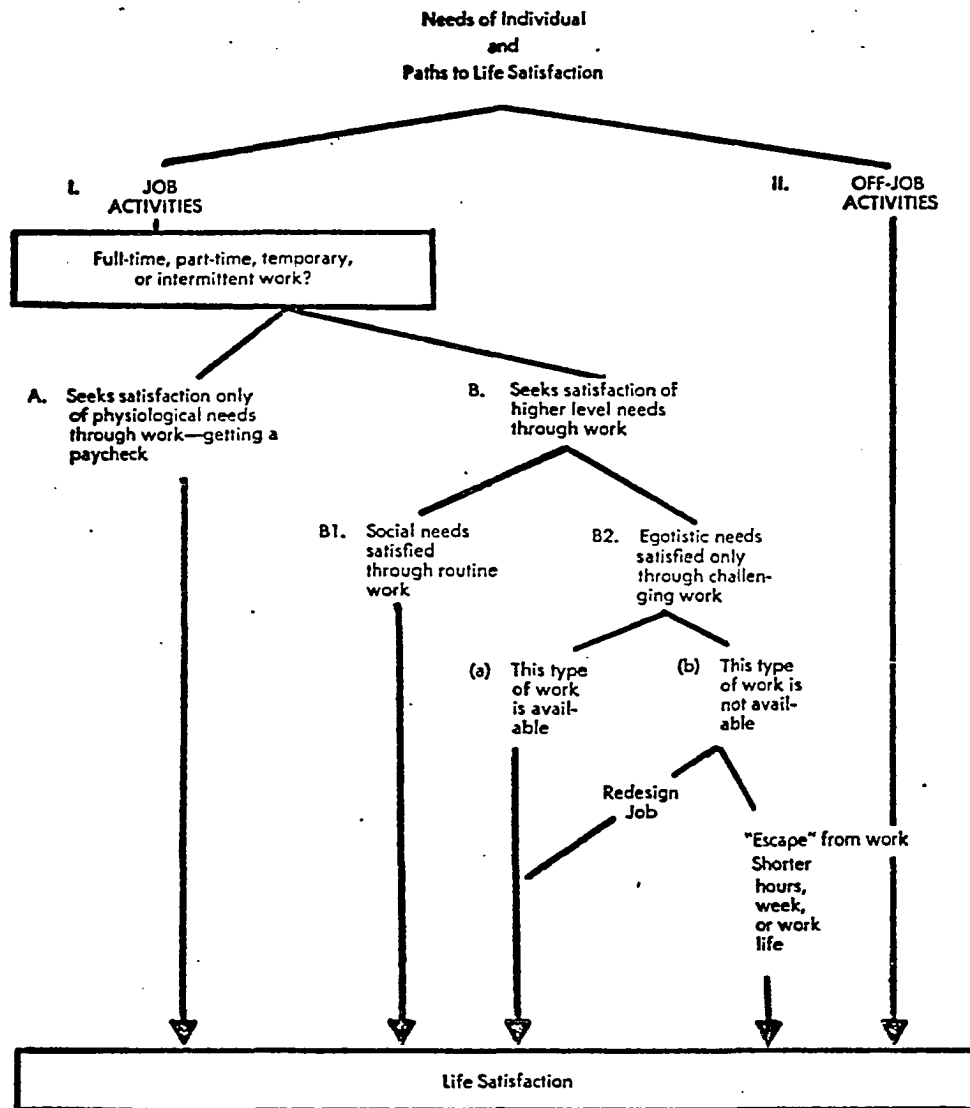
The Task Force Report suggests big needs in small business employee research.

According to one writer, "Of all the problems that the small businessman faces, none will be more challenging than those in the area of employee relations" (Pickle, et al., 1976, p. 209). He goes on to say, "Since Americans spend a great portion of their lives at work, the manager should recognize that the place of work has a profound impact on

the lives of individuals" (1976, p. 209). Also, in discussing the importance of work to the small business employee, Sutermeister and Saxberg say, "Each one is searching for satisfaction in life, but the routes to life satisfaction are many and varied and frequently changing" (Sutermeister and Saxberg, 1973, p. 9). In their model on paths to life satisfaction (Figure 2-1), Sutermeister and Saxberg suggest that both job activities and off-job activities may be used to achieve life satisfaction and that it is important for the perceptive small business manager to recognize the differences in employees. The authors go on to state, "The success in motivating them (employees) will be directly dependent on management's ability to humanize their organization, to recognize and support employees' search for life satisfaction along whatever path they may be seeking" (1973, p. 12).

In addressing the importance of small business personnel problems, Steinmetz says, "Only the worker's time can be hired; their attitudes, loyalty, cooperation, and productivity must be earned. This is the aim of good personnel work" (Steinmetz, et al., 1968, p. 310). Steinmetz further relates satisfied employees with success in customer relations when he states, "Customers are quick to sense employee's attitudes toward their management.... Thus, good employee relations are essential to good public relations" (1968, p. 290). With survey data and author

FIGURE 2-1  
PATHS TO LIFE SATISFACTION MODEL



SOURCE: Robert Sutermeister and Borje Saxberg, "Human Motivation in the Smaller Enterprise," Journal of Small Business Management (July, 1973) p. 11.

documentation of personnel importance in small business management, our review attention will now turn to research carried out in relation to small business employees pertaining to job satisfaction and interest in work.

### Research Related to Small Business Personnel

Limited amounts of research have been performed in the small business organizational environment related to personnel, and in particular job satisfaction and interest in work of small business employees. As will be cited later, voluminous amounts of literature have been printed in the job satisfaction area, and Dubin reports nineteen replications (Dubin, 1976, p. 273) of the central life interest instrument use, but very little specifically designated small business by either of the two previously mentioned small business definitions. The ease of securing a large organization to get sufficient sample size may have precluded extensive psychological or sociological documentation of the smaller, more difficult to collect, small business setting.

A project sponsored by the National Council for Small Business Management Development (NCSBMD) was funded to collect information on small business. A book, Small Business Information Sources (An Annotated Bibliography) written by Joseph Schabacker, contains a chapter on "Research Studies on Small Business." In this detailed listing of research, items were reviewed from colleges, universities,

government agencies, consultants, foundations, institutes, and businesses (Schabacker, 1976, p. 91). In total, 81 studies are listed, 5 pertain directly to personnel and none are research efforts on job satisfaction or interest in work. A thorough search of the Journal of Small Business Management over its 14 year life, reveals that 32 articles have appeared related to labor-personnel. Several articles related to employee satisfaction and interests included: Scanlan (1973, 1976), Richardson (1968), Baum and Sorensen (1970), Sutermeister and Saxberg (1973), and Rimler and Humphreys (1976).

Scanlan studied 166 junior and senior distributive education students and found, in part:

1. Interesting work was ranked most important by 30% of the group while 50% ranked it as one of the top three.
2. Money received for work performed was the second most frequently mentioned job factor. Eighteen percent of the sample ranked it as their number one choice and 47% placed it in one of the three top positions. (Scanlan, 1976, p. 48).

Thus, interesting work and money were important sources of motivation making it tenable that satisfaction is also tied to these factors for the distributive education students surveyed.

Richardson studied employees of a research organization in North Carolina and found: "...favorable response of the questionnaire for job satisfaction is associated with a strong belief in the work group, a consistent feeling of

being in a good working environment, having job independence, working for cooperative supervisors, and feeling that the pay is not adequate" (1968, pp. 7-13). Richardson's objective was to propose a merger of the attitude questionnaire and Q-sort technique. No levels of satisfaction were published.

Other research efforts have approached satisfaction and meaningful work in organizational theory studies based on organization size. In an article published in 1950, Worthy concluded work is more meaningful in the smaller organization. In spelling this out, Worthy states:

...the smaller organization represents a simpler social system than does the larger unit. There are fewer people, fewer levels in the organization hierarchy, and a less minute subdivision of labor. It is easier for the employee to adapt himself to such a simpler system and to win a place in it. His work becomes more meaningful, both to him and to his associates, because he and they can readily see its relation and importance to other functions and to the organization as a whole. The organization operates primarily through the face-to-face relationship of its members and only secondarily through impersonal, institutionalized relationships. The closer relations between the individual employee and the top executive in such a situation are only one aspect - but an important one - of the relatively simple and better integrated social systems of the smaller organization. (Worthy, 1950, p. 173). (Note: underlining added for emphasis by the author of this thesis).

A question that Worthy's statement raises relates to whether or not the personal, face-to-face relationship, given as an advantage of the smaller organizations, translates into a positive force for job satisfaction and interest in job for small business employees. This question will be addressed later in this thesis.

Meltzer and Salter in a study of scientific organizations found a curvilinear relationship between size and employee job satisfaction. They concluded that satisfaction was greater in medium-sized firms (21-50 employees) than in large firms (more than 50 employees) or small firms (less than 20 employees) (Meltzer and Salter, 1962, pp. 351-362). One must keep in mind the narrow strata of jobs taken in this research (scientific organizations) before generalizations are made.

Porter concluded that smaller sized organizations had greater job satisfaction than larger organizations (Porter, 1963, pp. 386-397). It should be noted that Porter's research was done with managers (N=1916) taken from an American Management Association mailing list. Satisfaction, as measured by the Porter Need Satisfaction Questionnaire (PNSQ), however, was not deemed "clearly" superior by Porter, as he stated, "...the present study shows that there was not a clear-cut superiority of small organizations over large organizations in producing maximum job satisfaction within management" (1963, p. 395). It should also be mentioned, at no time does Porter say his, "small organization" meets any definition of small business. His study operates purely on a quantitative figure of number of employees in the organization.

A relationship between employee satisfaction, organization size, and absenteeism was studied by Kovach



(1976). In the study of organizations of various sizes in the East, Kovach found that overall job satisfaction was higher in small organizations and was negatively correlated with absenteeism. Again, no attempt was made on Kovach's part to designate the small organization as "small business" by the present research efforts definition. However, the importance to be highlighted is the similar findings of Porter and Meltzer and Salter relating satisfaction and organization size.

One other research effort related to the small business environment, carried out by Simpson in a study of manufacturing businesses of 2-15 employees in Colorado, found satisfaction and performance were related to certain aspects of age, leadership, education, values, and sex. Simpson states: "The results of this study indicate that small business will be more likely to have subordinates with high satisfaction and performance if the ages of the subordinates are divergent from the supervision and each other" (1975, pp. 185-186). This finding suggests that age (both of superior and subordinate) is a relevant factor in job satisfaction. Simpson goes on to say, "Subordinate satisfaction and performance were higher in this research when the subordinates were similar to the leaders in authoritarianism and education level and similar to the group in values and sex" (1975, p. 186).

Conclusions about small business employees have given

this researcher added impetus to build a more exacting picture of the "root element" in the personnel function of the small business organization - that being a "head-on" look at small business employee job satisfaction and central life interest. According to Scanlan, "People today expect their work to be meaningful and significant, and it is in this area that the small business has some unique advantages and opportunities" (1973, p. 4). An understanding of satisfaction or dissatisfaction with specific aspects of work along with where the employee's interests lie, and if the place of these interests affect satisfaction, should provide small business owners with a foundation for approaching the job of creating "meaningful work." Sutermeister and Saxberg say, "Today, more and more people view their work life as only one part of a broader life experience involving family, community, social responsibility, and concern for political and economic issues." They go on to say, "The organization is one part of a man's life; his job or profession is another, his concern for society another, and his commitment to an organization is increasingly influenced by wife and family" (1973, p. 7). How important is the employment in the small business firm to this "broader life experience" as posited by Sutermeister and Saxberg? This researcher contends that the answer to this question will provide valuable input to aid in working with small business personnel. Robert Dubin proposed the Central Life Interest questionnaire to establish the job

orientation or non-job orientation of workers (1956, pp. 131-142).

### Central Life Interest Overview

From the point in history where the landmark "Hawthorne studies" brought social considerations to prominence in the management field, interest in the human element in his work environment has been mushrooming. The linkage between man and his work environment remains an important piece in the mosaic of "people management." Dubin has said:

Organizational programs designed to reduce turnover, increase loyalty, improve individual productivity, or attract workers to expanding organizations are grounded in assumptions about person-work linkages. Indeed, there are scarcely any considerations of the relations between people and work that do not take into account work-centered features that attract people (1976, p. 281).

Early in the search for this understanding of the meaning of work to the worker was Dubin's Central Life Interest study (Dubin, 1956, pp. 131-142).

In espousing the position that work was no longer the central life interest of the American industrial worker, Dubin noted, as Weber and Tawney had previously pointed out, "the capitalistic system itself is asserted to rest upon the moral and religious justification that the Reformation gave to work" (Dubin, 1956, p. 131). The contention that work was no longer the central life interest of industrial workers made by Dubin in 1956, now has a 21 year retrospect by which we can judge the position. In a later section, CLI use will

be examined.

Dubin defined central life interest as "the expressed preference for a given locale or situation in carrying out an activity" (1956, p. 134). He goes on to state in regard to the CLI questionnaire, "This questionnaire was designed to determine whether the job and workplace were central life interests of workers or whether other areas of their social experiences were important to them" (1956, p. 134). The questionnaire design will be discussed at a later point.

The results of the original Dubin study (1952-1953) of 491 industrial workers in three midwestern plants found "that for almost three out of every four industrial workers studied, work and the workplace are not central life interests" (1956, p. 131). Dubin echoed this message in two later publications (Dubin, 1958a and 1959).

In 1965, addressing the American Sociological Association, Dubin revealed that a study of 226 German industrial workers supported his original hypothesis (Dubin, 1965). During the intervening time period, six other studies had been published using the CLI, the results of which will be examined later in this chapter.

The work of Dubin, following the German study, was to take shape in a research effort starting in 1968, carrying on to the present, during which time central life interest would be studied in relation to performance (Dubin and Champoux, 1974), job satisfaction (Dubin, Champoux, and

Stampfl, 1973), individual-organizational linkages (Dubin, Taveggia, and Hedley, 1975), personality characteristics (Dubin and Champoux, 1973), and organization-person (Porter and Dubin, 1975). A culmination of these studies brought a conceptual scheme for sources of work attachment in which Dubin, aided by Hedley and Taveggia, empirically tested and found job-oriented individuals on the CLI have a different set of sources of work attachments when compared to non-job oriented individuals (Dubin, 1976, pp. 313-323).

With this quick scan of the work of Dubin, the next section will look in depth at Dubin's original study (1956) and follow-up study (1965). The research question hypotheses, CLI instrument, evaluation procedure, sample, and results will then be discussed.

#### Dubin's Original and Follow-up Studies

To reiterate, Dubin defined CLI as "the expressed preference for a given locale or situation in carrying out an activity." The basic assumption being challenged in Dubin's work was that work must be a central life interest because so many are engaged in it. Dubin assumes that "holding a job is simply evidence of adequate performance above some minimal level that justifies continued employment by the company" (1956, p. 134). Thus, the research question becomes "one of determining to what extent the job and its locale are central life interests to workers" (1956, p. 134). In

order to test this question, Dubin (1956, pp. 135-138)

developed the following hypotheses:

- H<sub>1</sub>: Overall  
A significant proportion of industrial workers will be classified as non-job-oriented when central life interest is measured with the CLI questionnaire.
- H<sub>2</sub>: Informal group experience  
A significant proportion of industrial workers to be non-job-oriented with respect specifically to informal group experiences when measured on the relevant portion of the CLI questionnaire.
- H<sub>3</sub>: General experience  
A significant proportion of industrial workers will not respond to work as a valued social experience when this is tested by the general experience section of the CLI questionnaire.
- H<sub>4</sub>: Organizational experience  
A significant proportion of industrial workers will score job-oriented for their organizational experience when measured on the organizational section of the CLI schedule.
- H<sub>5</sub>: Technological experience  
A significant proportion of industrial workers will be job-oriented for their experiences with technological aspects of their environments when measured on the technological section of the CLI questionnaire.

These hypotheses were devised to test the following propositions or generalized predictions (1956, p. 133):

Proposition 1: Individuals will exhibit adequate social behavior in sectors of social experience in which participation is mandatory but not valued. (Tested by H<sub>1</sub>).

Proposition 2: An individual's attachment to a situation in which his social experience is not valued by him will be to the most physically and directly obvious characteristics of that situation. (Tested by H<sub>4</sub> and H<sub>5</sub>).

Proposition 3: Primary human relations take place only in situations where the social experience is valued by the individual. (Tested by H<sub>2</sub> and H<sub>3</sub>).

Dubin defines "primary human relations" as "the relationships that occur in groups where the interaction is face-to-face, continuous, intimate, and shared over a wide range of subjects" (Dubin, 1956, p. 133).

The original instrument was a 40 statement questionnaire with the following question format:

I would rather take my vacation with

\_\_\_\_\_ my family

\_\_\_\_\_ some friends from work

\_\_\_\_\_ by myself

Each question contained three responses: a job-oriented, a non-job-oriented, and an indifferent response. The respondent was asked to check the response describing his/her choice, "even though none of the responses exactly fits his/her ideas." Of the 40 questions, 14 related to "informal group experience," 9 questions related to "general experience," 7 questions related to "organizational experience," and 10 questions related to "technological aspects" (Dubin, 1956, pp. 135-138). In the follow-up study with German industrial workers the questionnaire was modified to 32 questions, 8 questions in each of the 4 sectors. Obviously, with the modified questionnaire the weighting problem in determining overall CLI was eliminated. The 32 item questionnaire was used in the present study (see Appendix A).

The scoring procedure in the original study (40 items) was to designate as job-oriented those "who chose a

work-related response on at least half the questions in each group and answered the remaining ones with a non-job-oriented or indifferent response, or who had at least 70% of their answers made up of a combination of job-oriented and indifferent responses" (Dubin, 1956, p. 134). The remaining workers were designated non-job-oriented if they did not meet the above criteria.

The scoring procedure on the 32-item questionnaire was slightly changed. An individual was scored as job-oriented in a given section if he/she chose (a) job-oriented responses on at least one-half (4) of the questions or (b) had at least six answers in a combination of job-oriented and indifferent, of which at least three responses were job-oriented. If the respondent failed to meet these criteria, he/she was scored non-job-oriented. In scoring the overall CLI, 70% to total responses had to be job-oriented or indifferent with at least half job-oriented in order to be scored as a job-oriented individual. Again, any individual not meeting this criterion was scored as non-job-oriented.

A further slight modification was made in later studies by Dubin at which time a third category for "no clear preference" was created (Dubin and Champoux, 1973). The new scoring procedure provided that "a subject was scored job-oriented if he/she chose at least one-half or 16 job-oriented responses to the 32 items in the questionnaire. Alternatively, a subject was scored job-oriented if a total of 70% or 22



job-oriented and no preference alternatives were chosen with a minimum of 40% or 13 of his total responses being job-oriented" (Dubin and Champoux, 1974, pp. 317-318). A subject was scored non-job-oriented if he chose 16 non-job-oriented responses or 22 non-job-oriented and no preference with at least 13 responses being non-job-oriented. If the respondent could not be scored as job-oriented or non-job-oriented, he was scored as having no preference in CLI (1974, p. 318).

Dubin's original study was conducted in 1952-1953 using three midwestern industrial plants in three different cities ranging from 35,000 to 125,000 people. The companies ranged in size from 200-600 employees. One firm made industrial equipment, one firm was involved in manufacturing industrial dress and novelty gloves, and the third in making novelty advertising items (1956, pp. 133-134). Questionnaires were given to 491 workers, with intensive follow-up interviews with 120. In the follow-up study, 226 German industrial workers completed the questionnaire providing a cross-cultural sample.

Results of the original Dubin study led to the statement, "Our research shows that for almost three out of every four industrial workers studied, work and the workplace are not central life interests" (1956, p. 131). Dubin amplified on this when speaking to the Eleventh Annual Meeting of the Industrial Relations Research Association in 1959 when he said, "The remarkable conclusion is that a good deal of

working behavior is carried on by people who are indifferent to the things they are doing" (1959, p. 156). In the remainder of his speech, Dubin took this result and differentiated between necessary and voluntary behavior.

In the specific sectors of the CLI in the original study, the industrial workers were found to be non-job-oriented in informal experiences and general experiences, while being job-oriented in formal organization experience and technological aspects. The results are summarized in Table 2-2.

With the finding that only 24% of the industrial workers found their jobs and work places as central life interests Dubin states,

The factory as a locale for living out a lifetime seems clearly secondary to other areas of central life interest. The factory and factory work as sources of personal satisfaction, pride, satisfying human associations, perhaps even of pleasure in expressing what Veblen called the "instinct of workmanship," seem clearly subordinated in the American scene (1956, p. 135).

The results of each sector in the original study supported Dubin's propositions that the majority of industrial workers will find their formal organizational attachment and technical attachment in their workplace, but primary social relationships will take place off the job. The major implication of these conclusions, if representative of all industrial workers, is that personnel programs designed to develop the "company team" may be trying to reverse a sociological phenomenon that it has no control over and thus

TABLE 2-2  
RESULTS OF DUBIN'S ORIGINAL STUDY

	Job-Oriented		Non-Job-Oriented	
	No.	%	No.	%
Overall CLI	118	24	373	76
Informal	44	9	447	91
General	74	15	417	85
Organizational	300	61	191	39
Technical	309	63	182	37
N=491				

SOURCE: Robert Dubin, "Industrial Workers World: A Study of the Central Life Interests' of Industrial Workers," Social Problems III (January, 1956), pp. 135-138.

be doomed for failure (Dubin, 1956, p. 141).

In the follow-up study with German industrial workers, Dubin supported his original findings. In a speech before the Sixtieth Annual Meeting of the American Sociological Association, he cited a 1963 study of 226 German industrial workers which revealed an overall non-job-oriented CLI score by 56% of the workers. Table 2-3 contains the complete results.

Although the proportion of the overall CLI was not as great among German workers (56% non-job-oriented as compared to 76% of American industrial workers), the individual sectors followed the same pattern. Informal social experiences were found off the job whereas organizational and technical experiences were primarily job related. During the intervening period, six other published studies using the CLI took place and after the 1965 study, some eleven others.

#### Other CLI Studies

In the passage of time since Dubin's original study and reporting, replications have been numerous. The results of 20 studies have been summarized in Table 2-4. In only six of 20 studies have more than 50% of the workers been found to score job-oriented in their overall response to the CLI. The mean ( $\bar{X}$ ) of job-oriented responses overall has been 41%. Of the 14 studies where non-job-oriented responses

TABLE 2-3  
RESULTS OF DUBIN'S STUDY  
OF GERMAN INDUSTRIAL WORKERS

	Job-Oriented		Non-Job-Oriented	
	No.	%	No.	%
Overall CLI	99	44	127	56
Informal	25	11	201	89
General	113	50	113	50
Organizational	181	80	45	20
Technical	163	72	63	28
N = 226				

SOURCE: Robert Dubin, "Central Life Interest of German Industrial Workers, Paper Read at the 60th Annual Meeting of the American Sociological Association, Chicago, Illinois (1965).

TABLE 2-4

CENTRAL LIFE INTEREST RESEARCH  
STUDIES IN PERCENTAGES

<u>Year</u>	<u>Researcher</u>	<u>N</u>	<u>Overall</u>		<u>Informal</u>		<u>General</u>		<u>Organizational</u>		<u>Technical</u>	
			<u>JO</u>	<u>NJO</u>	<u>JO</u>	<u>NJO</u>	<u>JO</u>	<u>NJO</u>	<u>JO</u>	<u>NJO</u>	<u>JO</u>	<u>NJO</u>
1956	Dubin	491	24	76	9	91	15	85	61	39	63	37
1957	Corrie	592	70	30	34	66	--	--	96	4	82	18
1959	Orzack	150	78	22	45	55	67	33	91	9	87	13
1960	Ranta	232	85	15	52	48	77	23	94	6	87	13
1962	Ima	406	14	86	5	95	11	89	62	38	54	46
1962	Kremer	120	24	76	2	98	--	--	80	20	71	29
1962	Nelson	230	24	76	12	88	23	77	67	33	69	31
1965	Dubin	226	44	56	24	76	50	50	80	20	72	28
1965	Parker	343	28	72	--	--	--	--	--	--	--	--
1968	Brown	475	26	74	--	--	--	--	--	--	--	--
1968	Goldman	501	43	57	15	85	45	55	88	12	80	20
1968	Latta	349	12	88	8	92	18	82	34	66	62	38
1968	Maurer	111	54	46	5	95	57	43	76	24	87	13
1970	Bowin	384	41	59	11	89	--	--	84	16	73	27
1970	Endo	457	82	18	32	68	--	--	92	8	90	10

TABLE 2-4 (Continued)

1971	Starceovich	518	47	53	18	82	38	62	85	15	80	20
1971	Taveggia	2,298	26	74	--	--	--	--	--	--	--	--
*1972	Hanna	1,247	54	46	23	77	--	--	87	13	87	13
1973	Muhammed	377	23	77	--	--	--	--	--	--	--	--
1974	Dubin and Porter	945	16	84	--	--	--	--	--	--	--	--
<hr/> $\bar{X}$ =		521	41	59	20	80	40	60	78	22	76	24

\*NOTE: The Hanna study did not use the CLI questionnaire, but instead a twenty-seven item self-developed instrument. Since the results were reported in a manner consistent with Dubin, they were included in the table..

were found predominate, the mean drops to 28%. This lends support to Dubin's statement, "Work in our society does not appear to be a central life interest for a substantial proportion, if not a majority of our citizens" (1961, p. 80).

In a co-authored report, Dubin, Taveggia, and Hedley (1975) suggest that the "variation in overall central life interests is attributable, at least in part, to variations in the occupational and organizational settings within which these studies were conducted." In further elaboration the authors state, "...the climate or 'milieu' within which these people worked seems to have significantly affected their overall orientations to work" (Dubin, 1976, p. 283). In all 20 studies, the respondents were a part of relatively large organizations. This current research effort will take the CLI to small organizations with a desire to explore the possible effect, if any, of the face-to-face, personal atmosphere of the small business organization. The range of occupational and organizational settings, as well as location, of 20 CLI studies, are summarized in Table 2-5.

An introspect into selected studies, and the tying together of Table 2-4 and Table 2-5, now deserve attention. Corrie (1957), in a dissertation research effort, studied 592 employees of the Amana Refrigeration Company manufacturing plant in Amana Colony, Iowa. The "climate" was one of religious fervor, which was characterized by a very dedicated and industrious labor force. The belief that the Amana



TABLE 2-5

ORGANIZATIONAL SETTINGS OF NINETEEN  
CENTRAL LIFE INTEREST STUDIES

Year	Researcher	Organization Setting	Location
1956	Dubin	Industrial workers (blue collar)	Midwestern, U.S.
1957	Corrie	Amana Manufacturing (blue collar)	Iowa
1959	Orzack	Nurses	U.S.A.
1960	Ranta	Cooperative extension agents	Michigan
1962	Ima	Lumber workers	Northwest U.S.A.
1962	Kremer	Retail department stores	British Columbia, Canada
1962	Nelson	Industrial education teachers	Michigan
1965	Dubin	Industrial workers (blue collar)	Germany
1965	Parker	Bank employees, youth employment officers, child care employees	U.S.A.
1968	Brown	Industrial firm-blue collar, engineers, first line supervisors, senior supervisors, executives	Western, U.S.A.
1968	Goldman	Middle managers (7 Firms)	Midwest and Northwest U.S.A.
1968	Latta	Over-the-road truck drivers	Midwest, U.S.A.
1968	Maurer	Production supervisors (6 firms)	Michigan

TABLE 2-5 (Continued)

1970	Bowin	Middle managers from manufacturing, banking, and retailing	Oregon
1970	Endo	Middle managers	Japan
1971	Stavceovich	Industrial firm - first line managers middle managers, and professional employees	Southwestern, U.S.A.
1971	Taveggia	Industrial workers (6 firms)	Great Britain
1972	Hanna	Public school teachers	Minnesota
1973	Muhammed	-----	Canada
1974	Dubin and Porter	Telephone Company employees and bank employees	California

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respondents, because of this background, would not parallel Dubin's findings was borne out in that 70% (as compared to 24% in Dubin's study) were job-oriented on the overall CLI score. Testing a separate thesis, that workers living in the Amana colonies would be significantly more job-oriented than non-Amana Colony workers, was rejected. This finding lends support to the organizational "milieu" (in this case the Amish religion influence) argument, that is, setting affects CLI, in that the living location did not make a difference. Corrie also found the most important variables associated with job-orientation to be age, work, locale, and organizational work grouping. Least important were marital status, number of children, childhood residence, present community identification, and work shift (Corrie, 1957).

Orzack (1959) in his study of 150 nurses found, also, an overall job-orientation of 78%. However, it should be noted that in the informal experience section, nurses were only 45% job-oriented which supports Dubin. Orzack concludes, "...work is a central life interest for professionals; for four out of every five nurses studied, work and the workplace are central life interests" (1959, p. 126). This conclusion is later supported by Maurer (1968) and Endo (1970) where professionals were greater than 50% job-oriented. The conclusion was partially supported by Brown (1968) who found executives to be job-oriented and by Starcevich (1971) who found middle managers (53%) to be job-oriented. The

conclusion is not supported by Nelson (1962), Goldman (1968), Brown (1968) (engineers), and Bowin (1970).

Ranta (1960) studied 232 county extension agents and found the highest job-orientation of any of the studies (85%). This is the only study where the job-oriented responses to the "informal experience" section exceeded 50% (the percentage was 52). A possible explanation relates to the person-to-person nature of the work being performed by the extension agent. (This would hold true for the nurse also). Ranta also arrives at the finding of a moderate association between the independent variables of education work as CLI, and tenure, with the dependent variables being professional orientation and professional perception (Ranta, 1960).

The CLI was taken to the field of education by Nelson (1962), looking at 230 junior high school industrial education teachers. An equal amount of the teachers (24%) were found to be job-oriented as in Dubin's original study reported with industrial workers. The organizational and technical sections also paralleled Dubin's (67% and 69% respectively) as did the informal experience section (12%). Primary social relationships, quite obviously, were given as non-job-oriented by the teachers. In another study in the education field, Hanna (1972), came to a different conclusion. Hanna found 54% of the 1,247 high school teachers in his research to be job-oriented. It should be noted, Hanna used his own CLI instrument, not Dubin's. Hanna

found organizational and technical section responses were supportive of Nelson (87% and 87%, respectively) as was the formal experience response (23% job-oriented). Miskel and Gerhardt (1974, pp. 84-97) have also worked with CLI in the teaching field. They also developed their own instrument, a five question Likert-type scale. They did not report overall satisfaction, only that "older teachers expressed higher CLI in jobs than younger teachers" (Miskel and Gerhardt, 1974, p. 92).

The research of Kremer (1962) took the CLI to 120 retail department store employees. This was the first time for viewing the CLI in the context of large organization selling a product rather than an organization making a product. The results, again, backed the Dubin pattern with the overall CLI being 24% job-oriented. The organizational and technical section responses found by Kremer again parallel Dubin (80% and 71% respectively) while the informal experience response of 2% job-oriented is the lowest of any of the reported studies (Kremer, 1962). Two other studies, Parker (1965) and Dubin and Porter (1974) contained respondents in a service setting, Parker having part of his sample bank employees and Dubin and Porter also containing some bank employees. However, neither of these studies isolate bank tellers and loan officers (who are dealing person-to-person as do retail employees) from other bank workers, therefore, any support provided to the Kremer study

of retail workers would at best be tenuous.

Research by Brown (1968) took the CLI to five broad categories of employee classifications within the same large West Coast industrial firm. Classifications included executive, engineer, senior supervisors, first line supervisors, and production workers. The overall CLI for the 475 respondents across all employee classifications was 26% job-oriented, once more providing support for Dubin. Executives were found to be more job-oriented than any other classification while engineers were less job-oriented than any other classification (Brown, 1968).

Middle manager's response to CLI have been the object of research by Goldman (1968), Bowin (1970), Endo (1970), and Starcevich (1971). In a study of 506 male middle managers, predominately in the Midwest, Goldman found an overall CLI of 43% job-oriented. This is comparable to 41% found by Bowin (1970). Starcevich (1971) found of 182 middle managers in a single firm, 53% to be job-oriented. Endo (1970), researching middle managers in Japan, found 82% to be job-oriented. The finding of Endo definitely suggest a cultural phenomenon. However, Goldman, Bowin, and Starcevich findings show a greater, though definitely not clear cut, tendency for middle managers to have more job-orientation than industrial workers and teachers, but less than nurses and county extension agents.

Goldman and Bowin both follow the Dubin findings of job-orientation in organizational experience (88% and 84%

respectively), technical aspects (80% and 73% respectively), and informal experience (15% and 11% respectively). These findings support the Dubin propositions that when the social experience is not valued, the individual's attachment will be to the most physically and directly obvious characteristics of the situation. In this case, the middle managers were strongly attached to organizational and technical aspects of the job, but indicated very little preference for establishing primary relationships related to the job. Goldman's work related CLI to career anchorage points.<sup>5</sup> A general conclusion was that commitment to work as a CLI may be partially dependent on career anchorage points as upwardly anchored managers indicated a substantially greater CLI in work than either ambivalently or downwardly anchored managers (Goldman, 1968, p. 170). Bowin also studied CLI and career anchorage points, finding in general, that retailing and manufacturing middle managers who were upwardly career anchored were more work oriented than those managers who were downwardly anchored (Bowin, 1970). Banking managers were evenly divided as to job-orientation between those upwardly and downwardly anchored. This compatible finding by Goldman and Bowin--that is, job-orientation is

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<sup>5</sup>Goldman defines career anchorage as "orientations to occupational mobility in stratified occupational systems." He states that "downward career anchorage" is the anchoring of career perspectives on a career's origin, whereas "upward career anchorage" is anchoring in the level of ultimate possible achievement (Goldman, 1969, 3677-A).

significantly related to upward career anchorage--might provide some implications for the promotion section of measurement in job satisfaction studies. Dissatisfaction with promotion potential may be an indicator of personnel problems for upwardly career anchored individuals.

Vastly different outcomes from Dubin's were found by Endo among Japanese middle managers. In research involving 457 managers, Endo (1970) found 82% to be job-oriented as cited earlier. Previously cited work has found American managers much less job-oriented than the 82% figure for Japanese managers, which raises the possibility of cultural factors being responsible. The job-orientation in the organizational and technical sections (92% and 90% respectively) are in the same direction as Dubin's, being slightly stronger. A significant fact of Endo's study is that with overwhelming job-orientation in the previous cited measurements, the informal experience was only 32% job-oriented, the same general direction as the finding in 14 of 15 studies reporting informal experience results in Table 2-4.

Taveggia added another cultural setting to the list of CLI populations sampled. His study covered six manufacturing firms in the Midlands to West Country Scotland and Wales. The CLI was reported on an overall basis and in conjunction with a 124 statement work attachment questionnaire developed by Taveggia and Dubin (Dubin, 1976, p. 312). Taveggia found the British industrial workers to be 26%



job-oriented very close to Dubin's original 24%, but much less than Dubin's follow-up study with German workers (44%).

In a study carried out in a similar geographic location to the current research effort, Starcevich (1971) used the CLI questionnaire in connection with Herzberg's dual-factor theory to study employees of three categories within a single industrial organization. The geographical proximities of the Starcevich study and this current researcher's study are similar.

Starcevich divided employees into three categories, first line managers, middle managers, and professional employees. First line managers were defined as those "who qualify as supervisors in the Taft-Hartley Act definition and NLRB interpretation thereof" (Starcevich, 1971, p. 13). Middle managers were defined as those who "direct and control the work of one or more first-line managers," and "spend at least 80% of their time planning, organizing, directing, and controlling the work of others" (1971, pp. 13-14). A professional employee was defined, in summary, as a man with a high level of educational background, training, and proficiency in a specific recognized discipline; a member of a recognized professional association; 80% of his time spent within his specialized area; and his work is typified by freedom from direct supervision (1971, p. 14). Starcevich's findings for the above three categories of employees is shown in Table 2-6. Dubin's results are also included in Table 2-6.

TABLE 2-6

**VALUE ORIENTATION OF FIRST-LINE MANAGERS, MIDDLE  
MANAGERS, AND PROFESSIONAL EMPLOYEES STUDIED,  
AND INDUSTRIAL WORKERS STUDIED BY DUBIN**

Value Orientation	Employees' Studied Responses									
	Indus- trial workers (Dubin)		Total Re- sponse for employees studied		First- line managers		Middle managers		Profes- sional employees	
	#	%	#	%	#	%	#	%	#	%
Job- oriented	118	24.0	241	46.5	69	44.5	96	52.7	76	42.0
Non-job- oriented	373	76.0	277	53.5	86	55.5	86	47.3	105	58.0
Total N	491		518		155		182		181	

SOURCE: Matthew Starcevich, "An Analysis of the Relationship between the Dual-Factor Theory of Motivation and the Central Life Interest Theory of Employees," (Ph.D. dissertation, University of Oklahoma, 1971), p. 145.

In assessing overall CLI of his sample as compared to Dubin, Starcevich says (in reference to Dubin's statement that the workplace is no longer a valued social experience) "...such a generalization seems to be questionable for the managerial and professional employees studied" (Starcevich, 1971, p. 146). Two of the three job categories had greater numbers non-job-oriented, yet the magnitude of the numbers (56% and 58%) were not near that of Dubin's (76%).

Starcevich tested the significance of the difference against a Chi-square 50-50 hypothesis. Only the professional employees' category was significant at  $p=.05$  (Starcevich, 1971, p. 147). When Chi-square values were used to test the significance of response by organizational position (job category), no significance was found at the .05 significance level (1971, p. 147). A Chi-square test of Starcevich versus Dubin's findings in overall CLI orientation did find the difference highly significant.

The results of Starcevich's informal experience section was in the same direction as the Dubin study, but again not in the same magnitude. The "informal experience" preference for Starcevich and Dubin can be found in Appendix H. Chi-square revealed no significant difference between the way the employee categories responded ( $p=.05$ ) and did find significant difference between the Starcevich sample and Dubin's. Eighteen percent of the Starcevich sample responded as job-oriented as compared to 9% of Dubin's.

Starcevich accounts for this difference by saying, "This preference could be attributed to the wider circle of possible informal relationships that managerial and professional employees have available to them; thus increasing the probability of forming meaningful informal association on the job" (1971, p. 153). Even though the Starcevich finding in the "informal experience" area is greater than Dubin's, it should be noted that 82% of the respondents still looked outside their jobs for informal associations.

Dubin structured the "general experience" section of the CLI questionnaire to complement the "informal experience" section. The "general experience" was formulated to develop a direct indication of work and the workplace as a valued social experience. The Starcevich and Dubin's "general experience" findings can be found in Appendix H. The results of Starcevich's findings in this area were in the same direction as Dubin's (non-job-oriented), but not of the same magnitude. In a Chi-square test against the 50-50 hypothesis, first line managers and professional employees were significantly different ( $p=.05$ ) while middle managers were not (1971, p. 155). Starcevich states that no conclusion could be made about the hypothesis that the general experience section would find workers non-job-oriented.

The "organizational experience" section, developed to determine whether sources of organizational attachment existed where valued social experience was lacking, was

found by Starcevich to be much stronger than Dubin found. Starcevich and Dubin's findings related to "organizational experience" can be found in Appendix H. Chi-square testing revealed that the Starcevich sample was significantly more job-oriented in this "organizational experience" section than Dubin's industrial workers,  $p=.05$  (1971, p. 161). The increased attachment to organization is apparently accounted for in the ties managerial and professional employees establish as compared to industrial workers.

Dubin developed the "technical aspects" section of the CLI to further determine attachment to organization of workers. The results of Starcevich and Dubin studies on the "technical" section are shown in Appendix H. Starcevich's results were in the same direction as those of Dubin on this section, but were significantly larger in job-orientation (79% for all employees as compared to 63% of Dubin's). A Chi-square test of difference in response among employees by Starcevich revealed no significant difference ( $p=.05$ ) (1971, p. 165).

In summary, Starcevich found managerial and professional employees to be not as strongly non-job-oriented in social orientation as Dubin and more strongly job-oriented in organizational attachment. Starcevich makes the generalization, "...the employees surveyed have a well-developed sense of attachment to their work and work places without a corresponding sense of total commitment to it" (1971, p. 167).

Leaving the findings of Starcevich, the latest work of Dubin will be discussed in the following paragraphs.

Dubin, in 1968, started extensive work using the CLI as a base instrument to study sources of work attachment. Under Office of Naval Research funding, extensive investigation was made into individual-organization linkages including the following dependent variables: early employment experience, job characteristics, job attitudes (job satisfaction), turnover, absenteeism, job performance, and non-work activities (Porter and Dubin, 1975, pp. 2-4). The results of this seven year effort are summarized in "The Organization and the Person" (Porter and Dubin, 1975) and Handbook of Work, Organization, and Society, edited by Dubin (1976, Ch. 7).

One part of the above mentioned research effort was to study the relationship between CLI and job performance. Respondents included female non-supervisory clerical workers and male blue-collar in a large western telephone company. The CLI questionnaire was administered and performance evaluations were taken from the company's annual evaluation report on each employee. Multiple discriminant analysis was used to perform overall analysis of variance for correlated variables of CLI and job performance. Of the performance evaluation scales used by the company, adaptability, initiative and application, and cooperation ranked highest in discriminant function coefficients for males. For females,

adaptability, technical knowledge, cooperation, and job knowledge possessed the highest discriminant function coefficients (Dubin and Champoux, 1974, p. 320). When analysis was conducted between the performance evaluation scales and three groups of CLIs (i.e., job-oriented, non-job-oriented, and no preference), a statistically significant and moderate relationship existed between central life interests and individual job performance (see Table 2-7). As can be seen from Table 2-7, job-oriented blue-collar males rated highest of the three CLI groups on initiative and application, cooperation, and quantity of work, while being almost the lowest in adaptability. On the other hand, non-job-oriented males were rated highest in adaptability while lowest in initiative and application, and cooperation; and almost the lowest in quantity of work. The implication is, thus, job-oriented workers are more committed, but less flexible. Non-job-oriented individuals having ties outside are less sensitive about change within the work organization. In comparing the group means of evaluation scales for the CLI groups, it was found that uniformity existed in the means for "quality of work" (Dubin and Champoux, 1974, p. 323). The CLI orientation of both male and female seemed to have little influence on quality of work, suggesting commitment to the work place is not necessarily a factor in the quality of work an individual turns out. Dubin and Champoux note that the performance evaluations could possess, and probably

TABLE 2-7

MEANS FOR EACH PERFORMANCE EVALUATION SCALE  
BY CENTRAL LIFE INTEREST GROUP

Performance Evaluation Scale	Blue-Collar Males			Clerical Females		
	NJ <sup>a</sup>	NP	JO	NJ	NP	JO
Adaptability	3.40	3.23	3.26	3.18	3.28	2.89
Initiative and Application	3.05	3.28	3.74	3.09	3.28	3.56
Cooperation	3.23	3.30	3.87	3.36	3.49	3.89
Quantity of Work	3.23	3.22	3.57	3.18	3.33	3.22
Technical Knowledge	3.48	3.33	3.57	3.36	3.33	3.00
Quality of Work	3.25	3.29	3.30	3.27	3.29	3.33
Physical Fitness	3.25	3.32	3.61	3.18	3.35	3.44
Safety Performance	3.15	3.11	3.39	3.36	3.43	3.56
Job Knowledge	3.50	3.34	3.57	3.36	3.33	3.22
Dependability	3.20	3.35	3.65	3.55	3.42	3.67
n	40	148	23	11	69	9

SOURCE: Robert Dubin and Joseph Champoux, "Workers' Central Life Interests and Job Performance," Sociology of Work and Occupations, 1 (August, 1974), p. 322.

<sup>a</sup>NJ = non-oriented  
NP = no preference  
JO = job-oriented



do, supervisor's bias, but supervisors, without expressly knowing CLI's, tend to evaluate those job-oriented with the before mentioned characteristics.

In another phase of the latest Dubin research effort, a study was made of the relationship between CLI and personality characteristics (Dubin and Champoux, 1973). In this study the CLI questionnaire was administered, as well as the Ghiselli Self-Description Inventory. The results pointed to job-oriented males having the highest scores on Decisiveness, Initiative, and Supervisory Ability scales and the lowest score on Need for Job Security (Porter and Dubin, 1975, p. 11). Non-job-oriented workers had very different scores, highest in Need for Job Security and lowest in Decisiveness, Need for Occupational Achievement, Initiative, and Need for Self Actualization. Other findings in this study (Porter and Dubin, 1975, pp. 11-12) were as follows:

1. Job-oriented individuals (both male and female) had much higher commitments to their work organization than non-job-oriented workers.
2. Job-oriented individuals find attractive general organizational attributes, such as values of the organization, reputation, and its effectiveness, whereas non-job-oriented pick selective organizational features that they view instrumental to their non-job life.
3. Fellow workers are not viewed differently by their peers even though they possess different CLI orientation.
4. When a feature of the organization was unattractive (i.e., wages), none of the CLI orientation modified the perception of it.

From this phase of the study Dubin and Champoux conclude

that CLI orientation does possess a relationship to various personality traits.

Finally, another phase of the total research effort studied the relationship between CLI and job satisfaction (Dubin, Champoux, and Stampfl, 1973). The expected result was that the job satisfaction of individuals would be highest for those who had a CLI in work, and lowest for those whose CLI was non-job-oriented. This theoretical concept is an important part of the research effort of this present researcher and this study among small business employees. Therefore, we will postpone discussion of the Dubin, Champoux, and Stampfl study until the concluding section of this chapter.

Few CLI studies have related demographic characteristics in their findings. The following section will contain a short review of the Goldman study which did contain some demographic information.

Dubin did not report findings of the CLI as related to demographic variables. He suggested the possibility of a relationship between age and CLI interests. Goldman (1968) did report his findings related to age and education. Table 2-8 and Table 2-9 relates the Goldman results of a study among managers. The trend in work orientation is definitely a declining one when age is the variable. The "through 30" age group show 53% with work orientation as compared to 39% of the "over 46" age category. In viewing education as the

TABLE 2-8  
CENTRAL LIFE INTEREST AMONG YOUNGER  
AND OLDER MANAGERS

Central Life Interest	Age			
	Through 30	31-35	36-45	46 & Over
Work	53%	46%	39%	39%
Non-work	47	54	61	61
Total	100%	100%	100%	100%
N	95	61	160	179

SOURCE: Daniel Goldman, "Career Anchorage Points and CLI of Middle-managers" (Ph.D. dissertation, University of Oregon, 1968), p. 123.

TABLE 2-9  
CENTRAL LIFE INTEREST AND EDUCATION

Central Life Interest	Education				
	Non H.S. Grad.	H.S. Grad.	Some College	College Graduate	Post- graduate Training
Work	45%	38%	35%	50%	43%
Non-work	55	62	65	50	57
Total	100%	100%	100%	100%	100%
N	42	125	80	140	105

SOURCE: Daniel Goldman, op.cit., p. 134.

variable, an erratic trend line is shown. Non-high school graduates show more work orientation than high school graduates (45% to 38%). Those with some college drop even further (35%), and then those with college degrees jump the figure back up (50%). When Goldman viewed age and education together, some of the erratic nature of the education findings were explained. For those respondents with a high school diploma or less, the youngest age group (through 30 years of age) had the highest job-orientation (67%) while the over 46 age group was lowest at 37%. For those respondents with 1-4 years of college, the youngest age group had the highest job orientation (60%). Job-orientation dropped with age except for the over 46 age group which went back up (45%). Thus, Goldman's overall findings seem to suggest a decline in job-orientation with age, regardless of education level with the sole exception of the college educated, over 46 age group.

Before switching the focus of attention to job satisfaction, the criticisms of Dubin's work should be explored. The next section will look at some criticisms.

#### CLI Criticism

No highly acclaimed work passes without being purified in a crucible over the critical flame. In an article by Maurer (1968, p. 337), critics of Dubin's work are cited including Kornhauser (1965), Blauner (1964), and

Wilensky (1964). Starcevich (1971, p. 55) also cites these sources. A fourth to be considered will be Mannheim (1975). Attention will first go to Kornhauser.

Kornhauser in his book Mental Health of the Industrial Workers (1965), interviewed 655 male blue-collar Detroit factory workers. Of those interviewed 407 became the core sample. A detailed interview, primarily non-directive if the respondent volunteered, were carried on mostly in the homes. From this unstructured interview data, Kornhauser states, "...our research gives evidence of the psychological salience of the job within the factory population studies," (Kornhauser, 1965, p. 7). He states at another point, "...the foregoing results indicate that the job and its direct economic consequences are very much in the forefront of working people's thinking, at least on a par with family interests and decidedly more prominent than other segments of their lives" (1965, p. 9). An opposite conclusion has been widely cited on the basis of an empirical study by Dubin (1965, p. 328). Kornhauser arrived at his conclusion on the basis of grouping responses from the interviews into categories such as:

1. The job
2. Family relations; wife and children
3. Leisure and social activities
4. Own health, age, competence, and so on
5. Personal economic condition

6. Social conditions, war, politics, people, and so on (with no clear personal preference)
7. Life experiences and relationships (other than current economic) (1965, p. 8)

When all ideas discussed by the respondents were categorized, rankings were:

1. The job (26%)
2. Family relations (19%)
3. Leisure and social activities (16%)

When salient ideas (Kornhauser defines "salient" in this use as those items particularly stressed or mentioned repeatedly by the respondents) were categorized, the rankings were:

1. The job (22%)
2. Family relations (22%)
3. Personal economic conditions (17%)

From this data, Kornhauser sees the job of the industrial worker still as important.

In his direct criticism of the work of Dubin, Kornhauser makes the following comments:

In our opinion, the methods and data of that research (Dubin's) do not all justify the conclusion that work is not of central significance for workers. What the results indicate is that workers find their pleasures and intimate personal relationships more in nonwork situations than at work. A clear distinction must be made between the subjective importance of work and the satisfactions it provides. Dubin defines "central life interest" to refer to "expressed interest" for work relationships. Our own results, on the other hand, indicate how large the job looms in the worker's life, including its negative implications as well as the positive, and including feelings about the job's importance as a source of economic gratifications, its contribution to a sense of personal worth, and its implications regarding the workers' place in the community (1965, p. 328).

Thus, it is Kornhauser's contention that Dubin did not measure the significance of the workplace, but rather where "pleasure and intimate personal relationships" are found.

Maurer (1968, p. 337), in speaking of Blauner's criticism of Dubin, says, "... (Blauner) disputes the Dubin hypothesis and conclusions on a theoretical basis." This theoretical basis centers around views of the relationship of work to non-work activities. Two broad models of this relationship are the "spillover" model that suggests the individual carries his orientations from one institutional setting to another, and the "compensatory" model in which the individual is viewed as compensating for unrewarding experiences in one institutional setting by finding rewarding experiences in others (Porter and Dubin, 1975, p. 10). Blauner's most direct statement about CLI and Dubin's basic position is,

It is fashionable to argue that work alienation (defined as a quality of personal experience which results from specific kinds of social arrangements) is not an important present or potential problem because work has lost its former position as "the central life interest," particularly for manual workers. It is the hope of many that the opportunities for self-expression and creativity denied by modern technology and bureaucracy can be found again in the freely chosen pursuits of leisure time. The leisure argument is supported by the technological trends that are reducing the necessary number of hours each employee must work to produce the nation's goods and services and also by the tendency for higher levels of education to increase people's awareness of the many avenues of self-expression available in learning the arts, community affairs, and the world of hobbies and sports (1964, p. 183).

In this criticism Blauner is attacking the "compensatory"

nature, as he sees it, of the Dubin postulates. In his words, he will call it the "leisure argument." Blauner finishes his above statement by stating,

The problem with the leisure solution is that it underestimates the fact that work remains the single most important life activity for most people, in terms of time and energy, and ignores the subtle ways in which the quality of one's work life affects the quality of one's leisure, family, relations, and basic self-feelings (1964, pp. 183-184).

This, quite obviously, constitutes the "spillover" model.

Dubin, after numerous later studies, rebutted by stating,

...it is highly significant that workers who see their work as central life interests have positive linkages with work while those whose institutional attachments are outside work have negative attachments to the same work setting. Perhaps these findings, more than any other we will report, make sense out of the fact that a large proportion of working people do effective work even though they are linked to their work through negative work attachments. These are not the popularly labeled "alienated" workers.... Perhaps it is time to discard the alienation notion of explaining very little, if anything, about orientations toward work (1976, p. 314).

The theoretical difference of the significance of the work institution is the center of difference between Blauner and Dubin. Dubin summarizes this when he states,

Few would disagree that the work institution is one of the most important social institutions in industrial societies. However, considerable disagreement exists as to the significance of this institution for those who participate in it (1973, p. 282).

A third criticism of Dubin's work comes from Wilensky. He also studied work experience from the vantage point of "work alienation." Work alienation was defined as "the man



whose work role poorly fits his prized self-image" (Wilensky, 1964, p. 140). Alienation was measured by means of personal interviews and an alienation - indifference - attachment index. Wilensky states that he finds four categories useful in studying the world of work; (1) work roles, (2) workplace or organizational context, (3) occupational groups, and (4) type of career or job pattern (1964, p. 141).

Wilensky's criticism of Dubin challenges the Dubin assumption that in constructing his questionnaire he balanced the job-oriented and non-job-oriented responses to each question. Wilensky states,

Dubin's assumption that each question represents an activity that is as likely to occur "in connection with some aspect of the job or workplace" as "at some definite point in the community outside work" seems dubious (1964, p. 152).

For example, when the question is asked, "I would rather take my vacation with (1) my family; (2) some friends from work; (3) by myself; Wilensky is questioning whether the "my family" and "some friends from work" meet the assumption of "approximately equal likelihood." Another point of contention brought out by Wilensky is that maybe some job-oriented were lost by respondents not deciphering where experiences first occurred. He states, "It is possible that a friendship in the neighborhood or a social club was originally formed in the workplace, and many 'community' answers should have been coded 'job-oriented'" (1964, p. 152).

Mannheim also criticized the structure of the

questionnaire on grounds of it being cumbersome, culture bound, and lacking work subidentities. He states,

...the scale is rather lengthy and somewhat cumbersome and some of its items seem to be culture-bound with their emphasis on competing voluntary activities. It also lacks the component of work subidentities (1975, p. 81).

Mannheim's study was carried among 778 males in the Israeli labor force. The unique makeup of the Israeli people may very well allow justifiable criticism of the culture-bound nature of certain responses on the CLI in that particular setting.

Starcevich summarizes the criticisms of Dubin as follows:

1. All of the researchers (Kornhauser, Wilensky, Blauner, and Dubin) evaluate the worker's attitude and perception from a different perspective: Blauner is concerned with the degree of worker alienation; Wilensky with the "alienation-attachment-indifference relationship, as it relates to worker's self-indifference;" Kornhauser with the role of work in the worker's self-image; and Dubin with the expressed preference for a given locale or situation in carrying out an activity.
2. Dubin used a questionnaire for collection of data while Kornhauser and Wilensky used personal interviews and Blauner combined the interview with the participation observer method.
3. In the two studies where the relative importance of work was examined (Wilensky and Kornhauser), the results appear to support Dubin's theory. However, only Wilensky makes a statement to that effect (1971, pp. 60-61).

A major intent of this present study is to bring established behavioral research in contact with the small business community. The established questionnaire, backed

by numerous replications, seems the most desirable approach in our research. This research effort will use CLI defined as the "expressed preference of carrying out an activity" and not deal with the "alienation controversy."

Dubin's basic challenge, in his 1956 introduction of the central life interest concept, was that the Western culture assumption of the "centrality of the workplace" was wrong. His study, and numerous others previously mentioned have supported his position. The importance of this assumption is related very closely to the human relations and human resources movements of the past few decades. Involved in those movements have been numerous approaches to help solve "people problems" in an industrial technocracy such as: job enlargement, job enrichment, self-pacing, autonomy, decision participation, gliding time, fringe benefits, pay levels, supervisory consideration (initiation), flexible work hours, Junior Boards, and so on. All of these and other "people-oriented" approaches which are aimed at productivity, absenteeism, turnover, morale, commitment, and other worker problems, are grounded in assumptions about worker-organization ties. Dubin has stated, "The idea of attachments to work underlies all theories of motivation to work, and is a central concern of the analysis of work satisfaction" (1976, p. 281).

### Link between Central Life Interest and Job Satisfaction

A research question of this present thesis is "What is the relationship between central life interest and job satisfaction among small business employees?" In other words, are members of the American work force finding central life interests off the job and displaying dissatisfaction with work (and if so what areas of work) or do we find workers whose CLI must be in the work in order to be satisfied with the work? Human relations programs intended to increase commitment and loyalty to work may be doomed for failure if this central life interest shift is a culture-wide sociological phenomenon. Strauss, in evaluating the conflict between individual and organizational goals which can lead to job dissatisfaction, surmises that this conflict is based on the assumption of the job being the primary source of satisfaction. Strauss maintains that the primary focus (or CLI) of many people is not the job, but, for example, the home or community (1963, pp. 41-84). This position leaves open the possibility of an individual's off-the-job interest being a stronger force than job characteristics which are negative, thus allowing an individual to balance on-the-job dissatisfaction with off-the-job satisfaction. The reverse of this would be that an employee central life interest is driven to non-job settings because of the dissatisfying nature of work.

Sayles and Strauss commenting on the importance of the workplace, job satisfaction, and approaches to personnel management, say:

...some conclude that perhaps the best use of our resources is to accelerate automation, shorten the work week as fast as possible, forget about on-the-job satisfaction, and concentrate our energies on making leisure more meaningful. Others argue that it is impossible to compartmentalize work and leisure activities and that expanded leisure activities will never substitute for what is missing on the job....the between work and non-work activities is drawn much sharper today than it ever was in the past. Prior to large-scale commuting, people lived and played with the same people they worked with, and a whole series of ceremonies and other social activities tended to integrate work, family, and community life into a seamless web. In those days, people felt little need to "get away" from work (and, of course, less opportunity to do so). Today, since work and play occupy separate spheres in our lives, we feel under pressure to decide which is most important (1966, p. 27).

Sayles and Strauss go on to summarize the relative importance of job satisfaction as follows:

#### Job Satisfaction Important

1. People want self-actualization.
2. Those who do not obtain job satisfaction never reach psychological maturity.
3. Those who fail to obtain job satisfaction become frustrated.
4. The job is central to man's life.
5. Those without work are unhappy. People want to work even when they do not have to.
6. Lack of challenging work leads to low mental health.
7. Work and leisure patterns spill into each other. Those with uncreative jobs engage in uncreative recreation.

8. Lack of job satisfaction and alienation from work leads to lower morale, lower productivity, and an unhealthy society.

#### Job Satisfaction Unimportant

1. Some people prefer unchallenging work.
2. Individual personality becomes fixed before people start working. Work is not to blame.
3. Most people have relatively low levels of aspiration for job satisfaction and expect only routine work.
4. This is a professor's value. Many people focus their lives on family and community.
5. Even though there are social pressures to have a job, this does not mean the job must be challenging, etc.
6. Poor mental health may be due to low income or low status or routine jobs. Anyway, research findings are not conclusive.
7. A new bohemianism off the job will make up for increasing boredom at work.
8. We can provide challenging work for everybody only at the cost of eliminating our mass production technology and high standard of living--and society is unwilling to pay this price. (1966, p. 27).

The link between job satisfaction and central life interest seems to be worthy of additional research. Pioneer efforts in the relationship between central life interest and job satisfaction have been carried out by Starceovich (1971), Dubin, Champoux, and Stampfl (1973), and Miskell and Gerhardt (1974). These three studies will be reviewed at the conclusion of the next chapter after a review of job satisfaction.

## CHAPTER III

### REVIEW OF RELEVANT LITERATURE ON JOB SATISFACTION AND SELECTED DEMOGRAPHIC VARIABLES

Job satisfaction has received immense amounts of research and ink over the last two decades. According to a U.S. Department of Labor publication, Locke is quoted as saying, 3,350 articles, books, and dissertations have now been published on job satisfaction (U.S. Department of Labor, 1974). The following review will take the form of examining job satisfaction through definition, measurement technique, Smith's Job Description Index (JDI), other studies using the JDI, demographic factor findings, and the linkage of job satisfaction and central life interest. Defining of job satisfaction will be next.

#### Defining Job Satisfaction

Job satisfaction, according to Vroom, is defined as "affective orientations on the part of individuals toward work roles" (1964, p. 99). Locke states, "Job satisfaction is the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the

achievement of one's job values" (1968, p. 10). Getzels, Lipham, and Campbell state that job satisfaction "results from absence of conflict in the job" (1969, p. 129). Smith and her associates have maintained that job satisfaction is the "feeling or affective responses to facets of the situation" (Smith, Kendall, and Hulin, 1969, p. 6). Ivancevich and Donnelly have synthesized the definitions of Herzberg, Vroom, Maslow, and Wherry to define job satisfaction as "the favorable viewpoint of the worker toward the work role he presently occupies" (Ivancevich and Donnelly, 1968, p. 172). This research effort will accept that definition given by Smith and be referring to it when the term "job satisfaction" is used elsewhere in this thesis. Much of the controversy relating to the concept of job satisfaction has stemmed from definitional problems. Very little consistency of definition, measurement, and thus, comparability has been present.

Schwab and Cummings have dissected the job satisfaction definition problem as being one of defining in "a broad attitudinal sense" as contrasted to a "need deprivation" sense (1970, p. 422). Roots of the broad attitudinal approach stem from Hoppock's early work in his book, Job Satisfaction (1935). A highly accepted instrument using this definition was the Brayfield-Rothe Index (1951). The Brayfield-Rothe will be discussed later in the measurement section of this chapter. Peak has highlighted a problem, in



stating that a respondent can be positively valent in an attitudinal sense while simultaneously deficient in a need sense (1955, pp. 149-159). A subject may give a positive attitudinal response to his job, but if asked specific facets of his job, respond by displaying dissatisfaction. Thus, the operational definition when measuring job satisfaction becomes important. Evans (1969) and Wanous and Lawler (1972) have developed nine operational definitions of job satisfaction. Table 3-1 summarizes the work of Wanous and Lawler (1972, pp. 95-97), relating nine definitions with researcher use.

Wanous and Lawler then correlated each of the operational definitions in an empirical study with the mean of the job facet satisfaction measure and, then, with a single item measuring overall satisfaction. Table 3-2 states these findings.

Having the respondent answer "Is Now" type questions correlated at .82 with the mean of the job facet satisfaction measure and .61 with a single item measuring overall satisfaction, the best showing of the nine operational definitions. Smith's JDI fits into this category of "Is Now" type questionnaire. Respondents answer "Yes," "No," or "?" (cannot decide) to specific adjectives. (The instrument will be examined in detail later in this chapter). It should be pointed out, Smith does not say the summation of the five sector scores yields a reliable overall satisfaction

TABLE 3-1

NINE OPERATIONAL DEFINITIONS OF JOB  
SATISFACTION AND RESEARCH  
EFFORT WHERE USED

<u>Operational Definition</u>	<u>Use</u>
1. Sum of job facet satisfaction $JS = \sum (JFS)$	Ewen (1967), Brayfield and Rothe (1951), Kunin (1955)
2. Weighted sum of job facet satisfaction $(JS = \sum (Importance \times JFS))$	Blood (1969), Mikes and Hulin (1968), Ewen (1967)
3. Sum of goal attainment of need fulfillment $JS = \sum (Is\ Now)$	Porter (1961)
4. Weighted sum of goal attainment or need fulfillment $JS + \sum (Importance \times Is\ Now)$	Vroom (1964)
5. Discrepancy between "Should Be" and "Is Now" $JS = \sum (Should\ Be - Is\ Now)$	Porter (1961)
6. Weighted discrepancy between "Should Be" and "Is Now" $JS = \sum Importance \times (Should\ Be - Is\ Now)$	Porter (1961)
7. Correspondence between the reinforcer system of the work environment and the individual's needs $JS = \sum (Would\ Like - Is\ Now)$	Lofquist and Dawis (1969) Locke (1969)
8. Weighted correspondence between the reinforcer system of the work environment and the individual's needs $JS = \sum Importance \times (Would\ Like - Is\ Now)$	_____

TABLE 3-1 (Continued)

- |   |  |
|---|--|
| 9. Discrepancy between the importance of a job facet and the perception of fulfillment from a facet<br>JS = $\sum$ (Importance - Fulfillment) | Beer (1966), Kuhlen (1963),<br>Pelz and Andrews (1966) |
|---|--|

TABLE 3-2

OPERATIONAL DEFINITIONS OF OVERALL SATISFACTION  
CORRELATED WITH TWO DIRECT RATING  
MEASURES OF OVERALL SATISFACTION

Correlations with $\bar{X}$ of Job Facet Satisfaction Measures		Correlations with Single Item Measuring Overall Satisfaction	
r	Measure	r	Measure
92	Importance X Facet Satisfaction	61	Is Now
82	Is Now	60	Mean of Facet Satis- faction
74	Importance X Is Now	-54	Would Like - Is Now
-58	Would Like - Is Now	50	Importance X Facet Satisfaction
		48	Importance X Is Now
-58	Importance - Is Now	-45	Importance X (Would Like - Is Now)
-55	Importance X (Would Like - Is Now)	-44	Importance - Is Now
-44	Importance X (Should Be - Is Now)	-39	Importance X (Should Be - Is Now)
-34	Should Be - Is Now	-24	Should Be - Is Now

SOURCE: John P. Wanous and Edward E. Lawler III, "Measurement and Meaning of Job Satisfaction," Journal of Applied Psychology 56, 2 (1972), p. 98.

NOTE:  $-p < .001$  for all correlations (one-tailed test). Decimals have been omitted. Negative correlations appear because some of the operational definitions represent dissatisfaction.

measurement, although, many have used it as such. However, the work of Wanous and Lawler gives indication that the "Is Now" definitional format is the most sound measure of overall satisfaction. With this in mind, this research effort will accept the Smith definition, while recognizing the fact that there is not unanimity among researchers on a definition at this juncture. Our attention will now turn to the topic of measurement of job satisfaction.

### Job Satisfaction Measurement

The methodology of collecting job satisfaction responses can be divided into three basic issues. One is the issue of questionnaire versus interview to collect data. Second is the issue of open-ended (indirect) versus close-ended (direct) questions. Third, the issue of what components to use and how or if weighting is needed. This issue is very closely related to the operational definitions discussed earlier. In summary form below are the conclusions of Barnowe and his colleagues as related to strategies for measuring job satisfaction:

1. Questionnaire
2. Experimental design - manipulation of the quality of employment with respect to facets of the job.
3. Open-ended (semi-structured) interviews asking workers to identify major sources of satisfaction and dissatisfaction.
4. Identify a relationship between a criterion measure and the quality of employment with respect to an assortment of job facets. (Barnowe, Magione, and Quinn, 1971, pp. 3-5).

Another look at job measurement is a chronological look by Vaughn and Dunn (1972b). Vaughn and Dunn compared the popular measurement devices of Thurstone, Likert, Guttman, and Smith. Summarized, Vaughn, et al., states,

1. The Thurstone type attitude scale (Thurstone and Chave, 1929) is made up of scale statements which form a series of equal steps along the dimension of attitude-strength. The respondent indicates agreement or disagreement, i.e. "All wars are totally unjustified" is a stronger pacifist attitude than "Wars of defense, if unavoidable, are morally justified."
2. The Likert attitude scale (Likert, 1932) asks for the degree of agreement with each statement. The statements themselves do not have to be equally spaced to show strength of attitude. Respondents answer on a scale from strongly agree to strongly disagree, therefore, they do not have to be descriptive. The full range of facultive opinions needed to indicate the degree of intensity of feelings can usually be expressed by the range of the scale, i.e., "My supervisor is fair." Strongly agree...Agree... Disagree...Strongly Disagree.
3. The Guttman (Cornell) scale (Guttman and Kalish, 1956) utilizes a complicated schema in which statements are so composed that agreement with one implies agreement with all others "lower" on the scale, higher and lower being in terms of attitude strength rather than logical inclusiveness. The Guttman was popular because of its technical precision which seemed to enhance validity of the final quantitative score.
4. Smith's Job Description Index is a combination of the previous three scales. The Smith approach is unique in that it started with the assumption that evaluative statements were relatively useless in establishing states of mind. Thus, a statement such as, "My job is a good one" would not be used because this assertion by the employee about his job is evaluative in nature. To avoid this Smith used just the word "good" to which the respondent answers yes, no, or cannot decide (y, n, ?). (Vaughn and Dunn, 1972b, pp. 8-9).

The Smith scale seems to have captured valuable insights provided by the three earlier works cited. However, disagreement still remains as to how best to measure job satisfaction. Locke says, "The magnitude of a given outcome on overall job satisfaction, will depend of course, upon the relative importance to the individual of the value(s) involved and upon its degree of fulfillment (Locke, 1968, p. 30). Because of the seemingly "relative" nature of job satisfaction, a general criterion for measurement appears to be needed. Vaughn and Dunn have proposed a set of criteria for selecting a measurement instrument. The criteria are as follows:

1. It should index several dimensions of job satisfaction rather than an "over-all" (global dimension).
2. It should be applicable to a wide variety of jobs.
3. It should be sensitive to variation in attitude.
4. The instrument used should be of such a nature that the scale evokes cooperation from both management and employees.
5. The index should be reliable.
6. The index should be valid.
7. The index should be brief.
8. Normative data should be available (1972b, p. 2).

With the above criteria in mind, five prominent job satisfaction measures of the past 25 years will be considered.

Roberts and Savage state that in their view the major instruments include: the Brayfield-Rothe, the General Motors Faces Scale, Porter Need Satisfaction Questionnaire, and the

Smith Job Description Index (1973, p. 86). All four of these use the questionnaire approach. The Herzberg critical incident technique uses the interview for data gathering. A discussion of each measurement device will follow.

### Brayfield-Rothe Index

The Brayfield-Rothe (B-R) index is a "global" measure of job satisfaction. According to the authors of the index, "...job satisfaction can be inferred from the individual's attitude toward his work" (1951, p. 307). With this assumption, Brayfield and Rothe developed 18 questions to produce an attitude scaling. Questions included the following:

1. There are some conditions concerning my job that could be improved.
2. My job is like a hobby to me.
3. My job is usually interesting enough to me to keep me from getting bored.

The respondent chooses an answer best describing his or her attitude on his or her present job from a Likert-type scale ranging from strongly agree to strongly disagree (1951, p. 309). The complete questionnaire can be found in Appendix C. In testing for reliability the odd-even product moment reliability coefficient computed for this sample was .77 and was corrected by the Spearman-Brown formula to .87 (1951, p. 310). To test validity, Brayfield and Rothe administered the test to a class in Personnel Psychology. The class was divided between those employed in occupations appropriate to



their work interest (called Personnel) and those class members in occupations inappropriate to their expressed interests (called Non-Personnel). The mean of the Personnel group on the satisfaction scale was 76.9 while the Non-Personnel group had a mean score of 65.4. This was significant at the 1% level (1951, p. 311). Strongly satisfied responses, equally balanced between strongly agree and strongly disagree answers, were scored at five points each for a maximum score of 90.

Marconi reports the Brayfield-Rothe Index has been tested for homogeneity, but lacks testing for validity (Marconi, 1973, p. 5). Roberts and Savage say the 18 items in the questionnaire are "reliable and highly intercorrelated with other measures of job satisfaction (1973, p. 86). The Brayfield-Rothe Index fails to meet two of the Vaughn and Dunn criteria:

1. Only an overall measure of job satisfaction is given with no attention to specific dimension (facets), and
2. Normative data are not available.<sup>6</sup>

#### General Motors Faces Scale

The General Motors Faces Scale, developed by Kunin, was an attempt to remove the respondent's "verbal ability"

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<sup>6</sup>It should be added that Ewen (1967, p. 71) found the B-R index to be highly correlated with the summed JDI, correlations for three samples being .73, .50, and .66.

as a factor in answering job satisfaction questionnaires. He used global questions with 11 faces to choose from in responding. The faces ranged from very happy to very sad (1955, pp. 68-71). In testing the faces, Kunin developed "characterized faces" and "circular faces." Comparison of the faces was done by measuring the dispersion around the means as indicated by the standard deviations. Kunin reports, "In 9 out of 11 pairs the largest amount of spread was obtained in the series of circular faces. This would indicate that there is more heterogeneity in placing the circular than the characterized faces" (1955, p. 74). According to Roberts and Savage, their research "indicates that the Faces Scales is a fairly good measure of overall job satisfaction" (1973, p. 87). Dunham and Herman developed a female version of the Faces Scales which they administered to employees in a pharmaceutical firm. Their findings were that either male or female faces can be used interchangeably to measure job satisfaction of both males and females (Dunham and Herman, 1975, pp. 629-631).

The Faces Scales could be argued to strengthen criteria three and four of Vaughn and Dunn. Those criteria points dealt with sensitivity to variations in attitude and an instrument that would "evoke" cooperation. Removing the need to verbalize could be said to be more sensitive since a person with limited verbal ability could merely reflect in pictorial manner the response most reflecting his or her

attitude. Both employee and management might be led to increased cooperation because of the "face validity" of the instrument that pictures might elicit as compared to more cumbersome verbal responses. The chief disadvantage of the Faces Scales rests in its measure of a global dimension of job satisfaction (as previously cited in the B-R index) without specifying any dimensions of the job leading to that (dis)satisfaction.<sup>7</sup>

#### Porter Need Satisfaction Questionnaire

A third widely accepted measurement instrument is the Porter Need Satisfaction Questionnaire (PNSQ). The Porter instrument, based on the Maslow need hierarchy concept, measures perceived deficiencies in psychological need fulfillment and the importance attached to the needs by the respondent (1961, p. 3). Questions include the following:

1. The feeling of self-esteem a person gets from being in my management position:
  - (a) How much is there now?  
(min) 1 2 3 4 5 6 7 (max)
  - (b) How much should there be?  
(min) 1 2 3 4 5 6 7 (max)
  - (c) How important is this to me?  
(min) 1 2 3 4 5 6 7 (max)

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<sup>7</sup>The Faces have been found by Ewen to be highly correlated with the summed JDI, correlations for three samples being .74, .70, and .55 (Ewen, 1967, p. 71). Thus, it appears the summed responses of various facets of the job (as measured by the JDI) produce a significantly similar overall measurement of job satisfaction as that measured by both the B-R index and the Kunin Faces Scales.

## 2. The authority connected with my management position:

- (a) How much is there now?  
(min) 1 2 3 4 5 6 7 (max)
- (b) How much should there be?  
(min) 1 2 3 4 5 6 7 (max)
- (c) How important is this to me?  
(min) 1 2 3 4 5 6 7 (max)

See Appendix C for the complete questionnaire. When a respondent checked a "should be" higher than an "is now," a need deficiency is said to exist (dissatisfaction).

In relating the Vaughn and Dunn criteria to Porter's measurement instrument, the PNSQ is not applicable to a wide variety of jobs (primarily useful for managers) and the validity might be questioned, partially due to the abstract thinking a respondent must do in order to answer "is now," "should be," and "how important." Roberts and Savage say, "Our research indicates that the questionnaire may not measure the needs indicated" (1973, p. 87). The PNSQ does meet the first criterion of Vaughn and Dunn, that being the measurement of several dimensions (namely, social, ego, esteem, and self-actualization needs). In summary, the PNSQ uniquely measures dissatisfaction from a need fulfillment perspective. The questionnaire is selective in who it can be administered to and requires abstract thinking.

#### Herzberg Dual-Factor Theory

A fourth widely discussed measurement device is the Herzberg critical incident technique. This approach, which

led to Herzberg's famous and controversial dual-factor theory, is an interview method of data gathering. Herzberg (1959, 1966), studying accountants and engineers, asked the respondents open-ended questions to which the replies were personally generated. The questions were asked in a manner such as "What do you like about your job?" At a later date in a follow-up interview, the question was asked, "What do you dislike about your job?" The interviewer would then categorize the responses.

Critics of Herzberg have questioned the validity of this method. Ewen (1964) states that workers have a much more difficult time remembering times when no achievement or promotion occurred than incidents when they did occur. Vroom (1964), as well as Dunnette, Campbell and Hakel (1967), states that people have the persuasion to see satisfying experiences resulting because of themselves and dissatisfying experiences being caused by the external environment. In addition, Hulin and Smith (1967) and Lindsay, Marks, and Gorlow (1967) state that Herzberg arrives at his conclusions because of his methodology. Soliman (1970) tested the Herzberg approach against Smith's JDI and Porter's Need Satisfaction Questionnaire. His findings stated the motivation - hygiene theory was not substantiated and that "the Herzberg method has no concurrent validity" (1970, p. 453). Extensive review of Herzberg can be found in Starcevich (1971), Bockman (1971), and Wolf (1970).

Herzberg's technique met Vaughn and Dunn's first criterion, that of different dimensions of job satisfaction. The respondent's answers were categorized into achievement, recognition, work itself, responsibility, advancement, growth, company policy and administration, supervision, relationship with supervisors, work conditions, salary, relationship with peers, personal life, relationship with subordinates, status, and security. However, categorizing was dependent on the expertise of the interviewer. To avoid this possible methodological criticism, Friedlander (1964) devised a questionnaire in the format of the basic Herzberg interviews. Starcevich (1971) discusses and uses this questionnaire in his research.

In summary, Herzberg uses the open-ended interview to elicit job satisfaction responses. The technique is useable with respondents possessing sufficient verbal ability, but places high demands on interviewer expertise. The previously mentioned criticism of the methodology leaves suspect the validity of findings by this technique.

The above mentioned approaches to the gathering of job satisfaction data provide insight into the complexity of job satisfaction measurement. A seemingly big step in the right direction is the work of Patricia Smith and associates in collaborating to produce the Job Description Index (JDI). The next section will look at this measurement device to be followed by uses of the JDI.

### Job Description Index

Developed in Cornell studies of the early 60's, the Job Description Index has become one of the most (if not the most) widely used measures of job satisfaction. Early work on the index included Kendall, Smith, Hulin, and Locke (1962); Locke, Smith, Hulin, and Kendall (1962); Smith (1963); Hulin, Smith, Kendall, and Locke (1963); and Kendall (1961). The culmination of these works are published in Smith, Kendall, and Hulin's, The Measurement of Satisfaction in Work and Retirement (1969).

Smith, et al., do not purport to be providing a theory of job satisfaction, but rather "a strategy for the study of attitudes" (1969, p. 160). This strategy has been summarized by Tuttle and Hazel (1974, p. 23) as follows:

1. An adequate model of satisfaction must take into account interactive effects among variables.
2. Relationships between satisfaction and overt behavior vary from situation to situation.
3. Relationships between satisfaction and behavior cannot be reasonably expected unless the behavior can be considered to be an appropriate means of expressing satisfaction and dissatisfaction.
4. The manner in which questions are asked affects the time perspective of the respondent, and therefore, affects the alternatives he considers.
5. "Satisfaction is a product of other variables, and it may or may not serve as a cause in itself" (Smith, et al., 1969, p. 162).
6. There may be a relationship between satisfaction and behavior since the same variables producing the satisfaction might also produce the behavior

or changes in behavior may act to change the situation and, therefore, satisfaction.

7. The relationship between satisfaction and performance will vary depending on the aspects of the job being studied.
8. The importance of each aspect of the job situation influences the individual's feeling of satisfaction. Importance is considered to be a function of the discrepancy between the existing situation and the alternatives available,
9. Legitimacy, the group norms defining the legitimate requirements for a job for a specified group, influence the acceptance of a task and the attitude toward it.
10. "It is, therefore, the interrelationships of objective factors of the job, of individual capacities and experience, of alternatives available in the company and the community, and of the values of the individual, that can be expected to predict satisfaction and performance" (Smith, et al., 1969, p. 165).

The strategies point out the attempt of Smith and her colleagues to overcome previously mentioned shortcomings in job satisfaction research, i.e., lack of job dimensions (see Tuttle and Hazel's point 1 above), and methodology in soliciting responses (See Tuttle and Hazel's point 4 above).

The Smith definition of satisfaction is "the feelings a worker has about his job" or "feelings or affective responses to facets of the situation" (1969, p. 6). This definition is built on the following hypothesis:

...these feelings are associated with a perceived difference between what is expected as a fair and reasonable return (or, when the evaluation of future prospects is involved, what is aspired to) and what is experienced, in relation to the alternatives available in a given situation. Their relation to behavior depends upon the way in which the individual expects that form of behavior to help him achieve the goals he has accepted (Smith, et al., 1969, p. 6).



These assumptions place the JDI work in the need-expectancy theory of job satisfaction. This parallels the work of Porter as far as basic assumption, but differences will surface in the methodology of attitude sampling.

The JDI instrument has five sections covering the job dimensions of pay, promotion, co-workers, work, and supervision. A list of 18 adjectives is given under each of the 3 sections pertaining to work, supervision, and co-workers, while 9 adjectives are listed under each of the 2 sections pertaining to pay and promotion (see Appendix B for the complete JDI). The respondent is instructed to answer yes (y), no (n), or cannot decide (?) in front of each adjective given. Each of the dimensions is on a separate page and instructions ask the respondent to reply based on his or her current job.

Two questions arising from the final instrument are, (1) why the selection of five dimensions, and (2) how are the 18 or 9 adjectives, respectively, arrived at for each dimension? In answer to the first question, Smith, et al., state, "Unfortunately there is a very real problem with any study which attempts by means of factor analytic techniques to discover the dimensionality of any construct" (1969, p. 26). In citing the work of Humphreys (1962), Smith states, the problem that exists is the extreme splitting of the various human abilities into more and more pure factors which show less and less relation to non-test behavior. In

approaching this "splitting" problem, Smith and her associates went to a search of previous research to look for common agreement. In synthesizing the earlier work, a recurring thread seemed to weave through all. In the words of Smith,

If one takes into account the different terms used by different investigators to describe the very same or very similar factors...and the fact that many of the inventories which have been factored were originally designed with a specific population in mind, then it appears to us that the factor analytic studies which have been performed on the various job satisfaction inventories have yielded a very consistent pattern of factors. The factors which seem to emerge most consistently are a general factor; a pay and material-rewards factor, a factor dealing with the work itself, a supervision factor, and a factor related to the other workers on the job (1969, p. 30).

From this analysis, based on the synthesis of primarily factor-analyzed studies, Smith and associates arrived at the five dimensions used in the JDI.

The second question pertains to the development of the JDI adjective list. The JDI possesses 18 adjectives under the supervision, work, and co-worker headings. Examples of the adjectives under supervision include, "asks my advice," "hard to please," "impolite," and so on. Initially, Smith and associates studied the available job satisfaction questionnaires, went to factor analytic literature on job satisfaction, and used their own experience to develop a list of adjectives (1969, p. 31). In order to determine whether an adjective response signified satisfaction or dissatisfaction, a triadic scoring method was used

(as opposed to a prior assigning of values). For example, the adjective "routine" was given to a respondent and he/she was asked to respond based on his/her present job, the job he/she would most like to have, and the job he/she would least like to have. A response might be as follows:

Best Job	Present Job	Worst Job
yes ? <input checked="" type="radio"/> no routine	yes ? <input checked="" type="radio"/> no routine	<input checked="" type="radio"/> yes ? no routine

Since the respondent identified a "no" response for best job and present job, "no" for the adjective "routine" would be associated with satisfaction. Smith states the basic assumption with the above approach is "that the best and worst jobs chosen by each worker are not random choices, but in fact represent the boundaries of his/her occupational life-space. The job he/she describes as his/her best job should in some sense, represent an index of his/her aspiration level --the job he would most like to have (1969, p. 34). A scoring method similar to this can be found in Kilpatrick and Cantril (1960).

Extensive validation study was carried on by Smith, et al., to establish discriminant and convergent validity.<sup>9</sup> Smith, in reporting on the validation studies, states:

There is support for the contention that workers do respond differentially to specific aspects of the job which produce general attitudes to particular areas (work, pay, and so on), and that the differentiation of

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<sup>9</sup>Complete detail of a four phase study in different organizational settings is contained in The Measurement of Satisfaction in Work and Retirement, Chapter 3.

attitudes to areas is not solely an artifact resulting from questioning which forces attention on the dimensions suggested by the researcher (1969, p. 62).

Other researchers have followed up on validation studies of the JDI. According to Vroom, "The JDI is without doubt the most carefully constructed measure of job satisfaction in existence today" (1964, p. 100). Robinson, Athanasion, and Head (1969) and Quinn and Kahn (1967) state in different articles that the JDI possesses high convergent and discriminant validity. Smith, Smith, and Rollo (1974) in a study of 319 civil service employees, subjected the JDI to a discrimination test among black and white. Their conclusion was,

With the exception of the split in the work scale for whites and the splits in the supervision scale, the scales remained stable for these samples of subjects and extended the results of Smith (1969) for convergent and discriminant validity (1974, p. 100).

Milutinovich (1971) put the JDI to a validity test with group cohesiveness. In concluding, he states,

This study provides evidence of the construct validity of the JDI. If the satisfaction with co-workers scale really measures satisfaction with co-workers, then one would expect that its correlation with a measure of group cohesiveness would be higher than the cohesion measure with any other satisfaction scale (work, supervision, pay or promotion). This was exactly the case. Further, one would expect that the correlation between leadership style and satisfaction with supervision would be higher than the correlation with any other satisfaction variable. Again, that was precisely what happened (1971, p. 7).

Gillett and Schwab (1975) tested both the JDI and Minnesota Satisfaction Questionnaire (MSQ) against the Campbell and

Fiske multitrait - multimethod procedure (1959).<sup>10</sup> Their conclusion, "...the four satisfaction scales common to the JDI and MSQ show very high validities when judged against the absolute criteria of Campbell and Fiske" (Gillett and Schwab, 1975, p. 317). Evans tested the JDI and the goal-attainment portion of the Porter Need Satisfaction Questionnaire (PNSQ) and they "met all four criteria of Fiske and Campbell" (Evans, 1969, p. 105). Gillett and Schwab provide a summary of their findings and those of Evans for Criteria 2, 3, and 4 above. Table 3-3 gives those findings. All criteria are statistically significant except criterion 3 in the Evan's study.

Roberts, Walter, and Miles conducted a factor analytic study of job satisfaction items that were intended to measure need categories. They conclude, "Measuring satisfaction with the Porter-type format is apparently not

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<sup>10</sup>The criteria of Campbell and Fiske (1959) are:

1. Convergent validity - Are the entries on the validity diagonal significantly different from zero and reasonably large?

2. Discriminant validity - Is an entry in the validity diagonal higher than the values lying in its column and row where neither trait nor method is common? (Heterotrait --heteromethod).

3. Discriminant validity - Is an entry in the validity diagonal higher than correlations between that and other traits using the same method? (Heterotrait -- monomethod)

4. Discriminant validity - Is the pattern of correlations among traits the same for each method and for the combination among methods? (Kendall's W used for this test. See Siegel, 1956, pp. 229-238).

TABLE 3 - 3

## SUMMARY OF DISCRIMINANT VALIDITY IN GILLETT-SCHWAB'S STUDY AND EVAN'S STUDY

Discriminant Validity Criteria	Gillett-Schwab Study <sup>a</sup>	Evans (1969) <sup>b</sup>	
		Public Utility	Nurses
No. 2	1.00**	.96**	.92**
No. 3	1.00**	.54	.58
No. 4	.90**	.60*	.57*

SOURCE: Bernard Gillett and Donald Schwab, "Convergent and Discriminant Validities: JDI and MSQ Scales," Journal of Applied Psychology, 60,3, (1975), p. 316.

NOTE: Cell values indicate proportion of cases meeting the criterion of the study.

<sup>a</sup>Calculated on pay, supervision, promotions, and co-workers scales of the JDI.

<sup>b</sup>Calculated pay, supervision, co-workers, and work itself scales of the JDI.

\*  $p < .05$

\*\*  $p < .01$

as valid as is measuring satisfaction with environmentally focused (i.e., "now") items in more conventional formats (see for instance, Smith, et al., 1969)" (Roberts, Walter, and Miles, 1971, p. 219). This research added to the validity studies of the JDI.

Another important aspect of having a usable instrument is its internal consistency (reliability). Smith's report of the internal consistencies is shown in Table 3-4. The range from .80 to .88 for the five scales shows very high internal consistency. A second aspect of reliability is the test-retest estimate. Smith, et al., in testing 45 farmers' cooperative employees after a 3 year interval reports a relatively low correlation (.45 to .75) suggesting that the JDI measures satisfaction which is affected by the situation rather than remaining stable over time. However, according to Simpson, in a study by Hulin, the test-retest reliability is .85 (1975, p. 81). Problems of turnover, changing climates, and so on, make retesting after extended periods very difficult to do in a meaningful manner. Simpson cites a general disadvantage of the JDI as being its transparent nature to the respondent (1975, p. 81). Because of this factor, he suggests that care be taken to assure that the respondent is free from threatening use of the outcome from the data collected.

To summarize the acceptability of the JDI, the extensive validation and reliability studies done by Smith

TABLE 3 - 4  
INTERNAL CONSISTENCIES OF  
REVISED JDI SCALE

(N = 80 males)

Scale	Correlation of Random Split Halves	Correlations Corrected to Full Length by Spearman/Brown Formula
Work	.73	.84
Pay	.67	.80
Promotion	.75	.86
Supervision	.77	.87
Co-Workers	.78	.88

SOURCE: Patricia Smith, et al., The Measurement of Satisfaction in Work and Retirement (Chicago: Rand-McNally, 1969), p. 74.



and associates, backed by supportive findings of: Vroom, Robinson, Athanasion, and Head; Quinn and Kahn; Smith, Smith, and Rollo; Milutinovich; Gillett and Schwab; Evans; and Roberts, Walter, and Miles; speak very highly for the instrument. Glueck states that the JDI is "one of the most frequently used instruments" (1974, p. 60). Vaughn and Dunn state,

The JDI is simple. It can be described as "Occam's Razor favorite of job satisfaction research. This scientific rule of thumb enjoins the usage of the minimum number of conceptual categories to describe a given set of phenomena, consistent with full economy of explanation and description (1972b, p. 7).

The JDI stands out as well tested, documented, and used. The next section will scan the uses of the JDI.

#### JDI Use

Original normative work with the JDI was done with a sample of nearly 2000 males and 600 females from 20 different plants representing 19 different companies in 16 different Standard Metropolitan Statistical Areas (Smith, et al., 1969, p. 88). Characteristics of the companies in the normative sample are given in Table 3-5. The table shows wide diversity in product or service rendered, as well as size. The normative data relevant to this research effort can be found in Appendix D. Included in the normative data are demographic variables of sex, income, education, and job tenure.

Numerous uses of the JDI have occurred since its inception a short time back. Table 3-6 represents 45

TABLE 3-5  
CHARACTERISTICS OF COMPANIES  
IN NORMATIVE SAMPLE, 1960

<u>Plant</u>	<u>Loca- tion</u>	<u>Product or Service</u>	<u>Number of Employees</u>	<u>Average Annual Earnings</u>	
				<u>Male</u>	<u>Female</u>
1.	Mich.	Brass fittings	475	5220	3810
2.	Md.	Research	75	6380	3220
3.	Mass.	Office files	360	3140	1770
4.	Mass.	Electronics	3100	5310	3250
5.	Mass.	Aero-weapons	2500	5670	3050
6.	Conn.	Pumps	745	5890	3800
7.	Wis.	Heavy machinery	630	4830	3500
8.	N.Y.	Iron foundry	105	6400	----
9.	Ind.	Instruments	620	6330	4040
10.	N.Y.	Appliances	4200	6010	3790
11.	Wis.	Iron castings	115	4950	----
12.	Ill.	Retail	2000	5230	2190
13.	Ill.	Phone equipment	900	4560	3130
14.	N.C.	Textiles	505	3080	2230
15.	Mass.	Valves	415	5380	----
16.	Pa.	Glass	490	4730	3310
17.	Wis.	Small machinery	1000	5340	3610
18.	Minn.	Banking	1550	5670	3320
19.	Ill.	Power	720	6300	4000
20.	Tenn.	Chemical production	3000	6680	4850

SOURCE: Smith, et al., op cit., 1969, p. 90.

TABLE 3-6  
STUDIES USING JOB DESCRIPTION  
INDEX: 1963 - 1976

Date/Researcher(s)	N	Subjects	Topic	Capsulized Findings
1963 Smith/Kendall	85, 154, 88, 130, 55, 83	Head Nurses	Constructing unambiguous anchors for rating scales	Scale reliabilities ranged above .97
1964 Hulin/Smith	458	Employees, New England electronics firm, New England manufacturer of cardboard products, Mid-Western brass foundry	Sex and job satisfaction	Female workers tend to be somewhat less satisfied than males (Authors do not maintain sex is the crucial variable)
1965 Hulin/Smith	260	Employees, Two electronics firms, Northeast	Job satisfaction related to age, tenure on job, tenure with company, job level, salary	Only significant relationship was linear model of age and job satisfaction among males. (No support for Herzberg's U-shaped theory)
1965 Locke	85	Industrial Psychology students	Task success to task liking and satisfaction	Support for linear relationship between degree of success and degree of liking and satisfaction with task
1966 Ewen/Smith Hulin and Locke	793	Male employees, 21 industrial firms	Test dual-factor theory	Satisfiers and dissatisfiers do not accurately represent the manner in which job satisfaction variables operate

TABLE 3-6 (Continued)

1966	Hulin	--	Female clerical workers, 300 catalog order establishments of a large firm	Effects of community characteristics on job satisfaction	1) Average satisfaction scores and group productivity are unrelated; 2) Satisfaction negatively related to prosperity of the community; 3) Pay subscale (JDI) tended to be more negatively related to prosperity of the community than other subscales.
1966	Hulin	350	Female clerical workers, large firm, Canada	Job satisfaction and turnover	Females quitting subsequent to completing the job satisfaction questionnaire reported significantly less satisfaction with their jobs than those remaining (However, the authors state the relationship between satisfaction and turnover is not regarded as general)
1967	Blood/Hulin	1900	Male workers, 21 Eastern plants	Alienation, environmental characteristics, and worker responses	For blue collar workers, higher satisfaction on higher skilled jobs, alienated workers report lower satisfaction on highly skilled jobs
1967	Ewen	21 22 120	Male employees, personnel department, manufacturing Food manufacturing firm Manufacturing	Weighting components of job satisfaction using JDI, Brayfield-Rothe, and General Motors	Indicates the need to demonstrate usefulness of importance measures before accepting total scores weighted by importance (Unweighted, totals were highly correlated with overall measures of satisfaction)
1967	Hulin/Smith	670	International firm, Canada	Validity of Dual-Factor theory	Did not support hypothesis that satisfiers are not dissatisfiers and vice-versa

TABLE 3-6 (Continued)

1968	Graen	319	Male and female office workers, single large corporation	Validity of Dual-Factor theory	Rejected Dual-Factor theory when use JDI and GM Faces Scales in methodology
1968	Graen/Hulin	146	Male and female house office employees, single large corporation	Validity of Dual-Factor theory	Rejected Dual-Factor theory. Found intrinsic lead to both satisfaction and dissatisfaction
1968	Hulin	298	Female clerical workers, large international manufacturing firm	Attempt to increase job satisfaction and decrease turnover	Satisfaction was increased and turnover decreased in study
1968	Mikes/Hulin	660	Male and female workers, Canada	Importance of job aspects in measuring job satisfaction (weighting)	Importance of various aspects of the job has little value in a prediction situation involving job attitudes and behavior
1969	Blood	420	Air Force personnel students and permanent assignments	Relationship of protestant ethic to satisfaction	Support for hypothesis that agreement with Protestant ethic related to satisfaction with job
1969	Hulin	470	Males and female, white collar, two company towns, Canada	Community affect on job and life satisfaction	Support for differences in satisfaction with differences in community
1969	Evans	311 88	Employees, public utility Nurses	Test convergent and discriminate validities of JDI and measure of goal attainment (Porter)	Scales demonstrated convergent and discriminate validity
1970	Soliman	98	Public School teachers, Employees of mental health institute	Test one-factor and two-factor theories of job attitudes	Correlation of JDI and Herzberg method provided no support for the two-attitudes.

TABLE 3-6 (Continued)

1970	Wood/Sobel	72	First and second level managers, 21 U.S. Post Offices, Midwestern state	Job satisfaction of First level Manager as related to Leadership styles (His and Second Level) (Used JDI and Fiedler's LPC)	High LPC first and second level managers scored significantly higher in satisfaction
1971	Hulin/Waters	160	Non-supervisory females, National Insurance Company	Validity of Dual-Factor theory	Rejected Dual-Factor theory
1971	Milutinovich	--	Blue and white collar, Black and White races	Relationship of satisfaction and group cohesiveness among White and Black	1) Higher satisfaction under participative leader (both races). 2) Work subscale most powerful discriminant variable of satisfaction. 3) High correlation between cohesiveness and job satisfaction
1971	Waters/Roach	160	Non-supervisory females, National Insurance Company	Relationship between satisfaction and termination and absence.	Significant correlation between both termination and absences with the work subscale of the JDI
1972	Imparto	381	Male and female employees, Brooklyn Veterans Administration Hospital	JDI and Porter Need Satisfaction relationship	Correlation between JDI and Porter is not high
1972	Iris/Barrett	34 35	First level supervisors, Chemical plant, South	Job satisfaction, life satisfaction, and job importance	1) Relationship between satisfaction and pay was moderated by the favorability of the job situation; 2) Job importance is of value in understanding the interrelationship between job and life satisfaction

TABLE 3-6 (Continued)

1973	Altimus/Tersine	63	Blue collar males, one firm	Age and job satisfaction	Positive linear relationship between age and overall feeling of job satisfaction
1973	Dubin/Champoux/Stampfl	605	Female bank clerical, Male telephone company blue collar, female clerical telephone, West	Relationship of job satisfaction and CLI	General level of job satisfaction is highest among individuals with a work-oriented CLI
1973	Gannon/Hendrickson	69	Working wives	Job satisfaction and job involvement (Career orientation)	1) Greater job satisfaction when job involvement is high (used Lodahl and Kejner Job Involvement index). 2) Degree of family orientation not as strong a relationship to satisfaction as job involvement
1973	O'Reilly/Roberts	139	Female, white and Black, registered nurses, licensed vocational nurses, clerical personnel	Cultural variable in job satisfaction	Generally illustrate the existence of job satisfaction differences across a cultural dichotomy
1973	Waters/Roach	62, 90	Non-supervisory females, National Insurance Company	Satisfaction as predictor of temporary and permanent withdrawal from work	Job satisfaction is predictor of both permanent and temporary withdrawal (magnitude of correlation makes questionable)
1974	Smith/Smith/Rolla	434	Civil service employees (White and Black), Bank employees	Discrimination of job satisfaction by JDI among Whites and Blacks	Sub scales of JDI discriminated among three groups as predicted from known situations

TABLE 3-6 (Continued)

1974	Wanous	80	Female telephone operators	Job satisfaction and performance	Suggests performance causes intrinsic satisfaction and extrinsic satisfaction causes performance
1975	Gillet/Schwab	273	Male and female production workers	Test validities (convergent and discriminant) of JDI and Minnesota Satisfaction Questionnaire	Statistically significant convergent and discriminate validities were obtained
1975	Keller	51	Professional employees, Research and development Organization	Role conflict, ambiguity, and job satisfaction	Employees are significantly more satisfied with their jobs when expectations for performance are made clear and non-conflicting
1975	Miniter	190	Librarians from public, college and university, and special categories	Job satisfaction among Librarians	<ol style="list-style-type: none"> <li>1) Job satisfaction is partially a function of type of library,</li> <li>2) Special librarians experience lower job satisfaction,</li> <li>3) Female librarians are generally more satisfied than males</li> </ol>
1975	Petty/Lee	165	Non-academic employee, University of Alabama	Relationship of supervisor and subordinate based on sex	<ol style="list-style-type: none"> <li>1) Subordinates with supervisors high in consideration displayed,</li> <li>2) Satisfaction significantly higher for subordinates with female supervisors</li> </ol>
1975	Schneider/Snyder	522	Fifty life insurance agencies, including managers, assistant managers, secretaries, stenographers, agent trainees	Job satisfaction and organizational climate	<ol style="list-style-type: none"> <li>1) Neither satisfaction nor climate are strongly correlated with production data;</li> <li>2) Satisfaction, but not climate, is associated with turnover</li> </ol>



TABLE 3-6 (Continued)

1975	Schuler	391	Employees, large manufacturing firm	Role perception, job satisfaction, and performance	1) Role ambiguity found to have a greater negative relationship than role conflict with job satisfaction for high level employees, 2) Role conflict found to have a greater negative relationship than role ambiguity with job satisfaction for low level employees
1975	Sims/Szilagyi	40	Female associate directors and female head nurses, Midwestern Medical Center	Leadership style and job satisfaction of subordinate	Initiating leadership structure was more important source of role clarification and subordinate satisfaction at higher level occupation
1975	Stone/Porter	--	Blue collar, urban worker	Job scope and job satisfaction	Job scope indices, such as variety, autonomy, and so on were significantly related to job satisfaction
1976	Abraham	95	Employees, small industrial plant, Southwest	Employee turnover and retention based on background, job satisfaction, and reasons for staying	1) Job tenure does not connote job satisfaction 2) Significant difference in biographical data between stayers and leavers
1976	Baird	167	State agency employees	Performance and satisfaction relationship in stimulating and non-stimulating jobs	1) Satisfaction higher in stimulating than non-stimulating jobs; 2) High performers were more satisfied than low performers
1976	Kim/Hamner	113	Employees, large telephone company	Performance feedback and goal setting as related to job satisfaction and productivity	No change in level of satisfaction of employees with their perceived opportunity for promotion or their work on the present job

TABLE 3-6 (Continued)

1976	Petty/Miles	226	Professional employees of Social service organizations in Southeast (88% female)	Sex-role stereotyping and job satisfaction in female dominated work culture	Some support for stereotyping existent and shared by subordinates of both sexes
1976	Umstot/Bell Mitchell	42	Cascade Management Services (Wisc), (Company created to study workers)	Effects of job enrichment and task goals on satisfaction and productivity	1) Job enrichment had a substantial impact on job satisfaction, but little effect on productivity 2) Goal setting had a major impact on productivity and less substantial impact on job satisfaction
1976	Waters/Roach Waters	152	Non-supervisory female clerical workers	Job satisfaction, estimates of tenure, and biographical data as predictors of termination	Significant relationship between work subscale of JDI and termination

instances gleaned from the literature. As can be seen from the table, in the early years attention was centered around validation of the JDI instrument and as a means to test the Herzberg dual-factor theory. It was first used in relation to a demographic variable, sex, in this early period. Most of the early use was done by Smith, Hulin, Locke, and Kendall, who were a part of its development. After the publishing of the JDI in The Measurement Satisfaction in Work and Retirement in 1969, numerous other researchers enlisted the use of this instrument. A summary of the subjects sampled by the JDI in the 45 studies cited is given in Table 3-7. The greatest use has been in the industrial setting with the production worker, followed by use among clerical workers and service organization employees (i.e., telephone, social service, insurance, and so on).

In analyzing the variables related to JDI use, a sizeable number are involved. Table 3-8 summarizes the variables used in the 45 studies cited previously. The greatest use of the JDI, in the studies cited, is to test the Herzberg's dual-factor theory. This is followed by researching the relationship between satisfaction and performance, leadership, validity (JDI to other measures), tenure, racial implications, and sex.

The JDI has received extensive use with various subjects and in relationship with numerous variables. Leaving the JDI, the next sections will furnish a review of

TABLE 3 - 7  
SUMMARY OF SUBJECTS IN  
JDI STUDIES CITED

Occupational Area	Numbers of Studies
Industrial employees	12
Female clerical	9
Service organization employees	8
Professional and Supervisors	5
Nurses	4
Education	3
Hospital employees	2
Office employees	2
University employees	1
Public utility employees	1
Research and Development Organization employees	1
Working wives	1
Military	1

NOTE: Some studies covered more than one category of occupation, therefore, the total number of studies is greater than 45.

TABLE 3 - 8

SUMMARY OF VARIABLES USED IN RELATION  
TO JDI IN STUDIES CITED

Variable	Number of Studies
Dual-factor theory	6
Performance	5
Leadership	4
Validity	4
Tenure	3
Bi-racial	3
Sex	3
Weighting	2
Age	2
Community characteristics	2
Role perception	2
Organizational climate	2
Goal setting	2
Organizational level	2
Job importance	1
Job enrichment	1
Alienation	1
Skill level	1
Job scope	1
Ambiguity	1
Job involvement	1

TABLE 3 - 8 (Continued)

Absence	1
Group cohesiveness	1
Task liking	1
Protestant ethic	1
Central Life Interests	1

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NOTE: Many studies covered more than one variable so total number of studies is greater than 45.

job satisfaction as related to the demographic variables of sex, age, tenure, and education. The first to be reviewed will be sex and job satisfaction.

### Sex and Job Satisfaction

Early in job satisfaction study consideration was given to the question, "Are men more satisfied with their work than women?" Cole (1940) found women to be less satisfied with their work than men. However, Bengtson (1944) and Stockford and Kunze (1950) concluded that women are more satisfied with their work than men. Blood, Harwood, and Vernon (1942) studied the psychological adjustment to war-time working conditions in Great Britain and found women possessed more maladjustment than men. In the teaching profession, Chase (1951) found women teachers to be more satisfied than men. Peck (1936) concluded women teachers were more poorly adjusted than men. Herzberg, in a review of the literature in 1957, found six studies where women were shown to be more satisfied than men; in three studies women were less satisfied than men; and in five no difference emerged (1957, p. 13). Herzberg states that it is "probable that the job attitudes of women who are career oriented are similar in many respects to those of men instead of being similar to the job attitudes of non-career oriented women" (1957, p. 14). A logical deduction from this statement would be that females who are job-oriented should be as satisfied as males with their work.

Herzberg has summarized nine studies of over 10,000 employees as to specific work characteristics that are more important to females than males, and vice versa. Table 3-9 presents those findings. Herzberg relates that the characteristic most apparently different in importance for male and female is working conditions. Women are substantially more interested in working conditions than men. Herzberg presents the concept that men grow up expecting to work while women, with less certainty because of work versus marriage possibilities, may possess different desires from their workplace. Lewis (1968) argues that the reasons for differences between male and female satisfaction are related more to interpersonal variables and less to personal achievement as is true for men. Lewis' analysis of the literature agreed with Herzberg in finding that women rated extrinsic factors as more important while men rated intrinsic factors highest.

Hinkley, in a study of sex differences and intrinsic job satisfaction, sampled 378 persons receiving degrees in adult education. She concluded that females found less gratification in higher level needs than males in the performance of job related tasks (1976, p. 1). This concurs with Herzberg and Lewis.

Gannon and Hendrickson picked up on Herzberg's concept of females facing greater uncertainty about the work world by researching 69 working wives and the relationship between job involvement and job satisfaction. They found



TABLE 3 - 9

SUMMARY OF WORK CHARACTERISTICS IMPORTANCE  
TO MALES AND FEMALES

Factor	Response*
Security	O.
Opportunity for advancement	M
Company and management	O
Wages	O
Intrinsic aspects of the job (excluding ease)	M
Supervision	F.
Social aspects of the job	F
Working conditions (excluding hours)	F
Hours	M
Ease of work	F
Benefits	O

SOURCE: Herzberg, et al., op cit., 1957, p. 52.

\*NOTE: M indicates that males scored higher on that factor; F indicates that females scored higher; O indicates no difference between the sexes in their scores.

positive correlation and significant relationship between job involvement and job satisfaction (1973, p. 339). In addition, they state, "This finding suggests that the influence of job involvement or job satisfaction is similar among males and females" (1973, p. 340). Weissenberg and Gruenfeld (1968) arrived at a similar finding.

Studies by Hulin and Smith (1964), Jury (1971), and Johnson and Johnson (1972) display the lack of consensus in sex and job satisfaction research. Hulin and Smith found women in production jobs to be less satisfied than men, in general. Jury studied salaried employees from six firms and concluded there is no difference between sexes in satisfaction. Johnson and Johnson in a study of recent high school graduates found females, in general, to be more satisfied than men. More details will be presented for each of these three studies.

The Hulin and Smith study involved 458 employees from three industrial plants. The JDI was used to collect job satisfaction responses and these were subjected to the multivariant Hotelling  $T^2$  analysis (Hulin and Smith, 1964, p. 90). Table 3-10 relates the vectors of mean differences for the four samples and the five subscales of the JDI as reported by Hulin and Smith. A positive element in the vectors indicates that the male workers were more satisfied with that aspect of their work than were the females (Hulin and Smith, 1964, p. 90). As can be seen in the table, in three of the

TABLE 3-10  
VECTORS OF MEAN DIFFERENCES

Company	Area of Job Satisfaction					P
	Work	Pay	Promotions	Supervision	People	
I, Plant A	.88	1.28	8.64	5.08	5.10	.05
I, Plant B	-1.88	-3.28	2.92	.14	-1.18	ns
II	2.80	-.48	4.91	1.10	6.37	.05
III	.00	-2.00	6.72	2.37	1.86	.05

SOURCE: Charles L. Hulin and Patricia Smith, "Sex Differences in Job Satisfaction," Journal of Applied Psychology, 48,2 (1964), p. 90.

four plants females were significantly less satisfied. The pay subscale was the exception, the males displaying greater dissatisfaction in three of the four samples. It should be noted that Hulin and Smith, even though reporting females generally more dissatisfied, state in their conclusion, "We do not maintain that sex per se is the crucial factor which leads to either high or low satisfaction. It is, rather, the entire constellation of variables which consistently co-vary with sex; for example, pay, job level, promotion opportunities, societal norms, etc., that is likely causing the differences in job satisfaction" (Hulin and Smith, 1964, p. 91).

Herzberg had also alluded to differences in pay and promotion opportunity as being factors in satisfaction differences between the sexes (1957, pp. 13-14).

Jury, in an Office of Naval Research project, studied 1,139 salaried employees from six companies to explore the relationship of job satisfaction to the demographic factors of age, sex, education, and tenure, among others. Twenty-eight satisfaction scales were used. The principal factor method was used with the factors being rotated using an orthogonal varimax rotation (Jury, 1971, p. 3). Jury concluded there was no difference between sexes in satisfaction, except that females differentiated more clearly between superior-subordinate interactions and the organizational contexts than did males (1971, p. 6). This would seemingly parallel the previous comments by Herzberg, Lewis, and

Hinkley regarding extrinsic factors being more important to females.<sup>11</sup>

Johnson and Johnson studied recent graduates from high school to see if a relationship existed between job satisfaction, job classification, and sex. A single global measure of job satisfaction was used, "How well do you like your occupation?" Table 3-11 relates the findings of this study. Females displayed greater satisfaction than their male peers in professional-technical-managerial, clerical-sales, service, and benchwork. The other classifications possessed too small a number of female subjects to draw any conclusions. The total female satisfaction (85%) stands significantly above the male total (69%). It would seem quite possible that the age of this sample was a factor in the outcome.

The relationship of sex of worker and satisfaction is still an open question. The next section will be devoted to a review of literature on age as related to job satisfaction.

#### Age and Job Satisfaction

Three distinct models of the relationship between age

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<sup>11</sup>An additional study of satisfaction and sex considering sex of superior and leadership style of superior was conducted by Petty and Lee (1975). Generally, female subordinates displayed greater satisfaction than male subordinates when the superior was female. When the superior was male, the male subordinates were higher in satisfaction than the female subordinates.

TABLE 3 - 11  
 JOB SATISFACTION, JOB CLASSIFICATION, AND SEX

Classification	Females				Males			
	Satisfied/Dissatisfied		Satisfied/Dissatisfied		Satisfied/Dissatisfied		Satisfied/Dissatisfied	
	N	%	N	%	N	%	N	%
Prof-Tech-Mgr	14	100	0	100	11	79	3	21
Clerical-Sales	160	90	18	10	19	68	9	32
Service	19	86	3	14	5	56	4	44
Processing	1	100	0	0	4	50	4	50
Machine Trade	2	50	2	50	19	79	5	21
Benchwork	14	54	12	46	3	38	5	62
Structural Work	0	0	1	100	10	71	4	29
Miscellaneous	9	82	2	18	10	83	2	17
Total by Sex	219	85	38	15	81	69	36	31

SOURCE: L. Johnson and R. Johnson, "High School Preparation, Occupation, and Job Satisfaction," Vocational Guidance Quarterly, (June, 1972), p. 290.

and job satisfaction are existent today (Faris, 1976, p. 23). The three models include research findings that suggest satisfaction drops in early years and then rises from the late twenties on (U-Shaped Model); research findings that suggest satisfaction increases with age (Linear Model); and research findings that suggest satisfaction increases with age, but starts declining in pre-retirement years (Inverted U-Shaped Model).

Herzberg (1957) in his extensive study found 17 of 23 studies reviewed supported the U-Shaped Model. He stated,

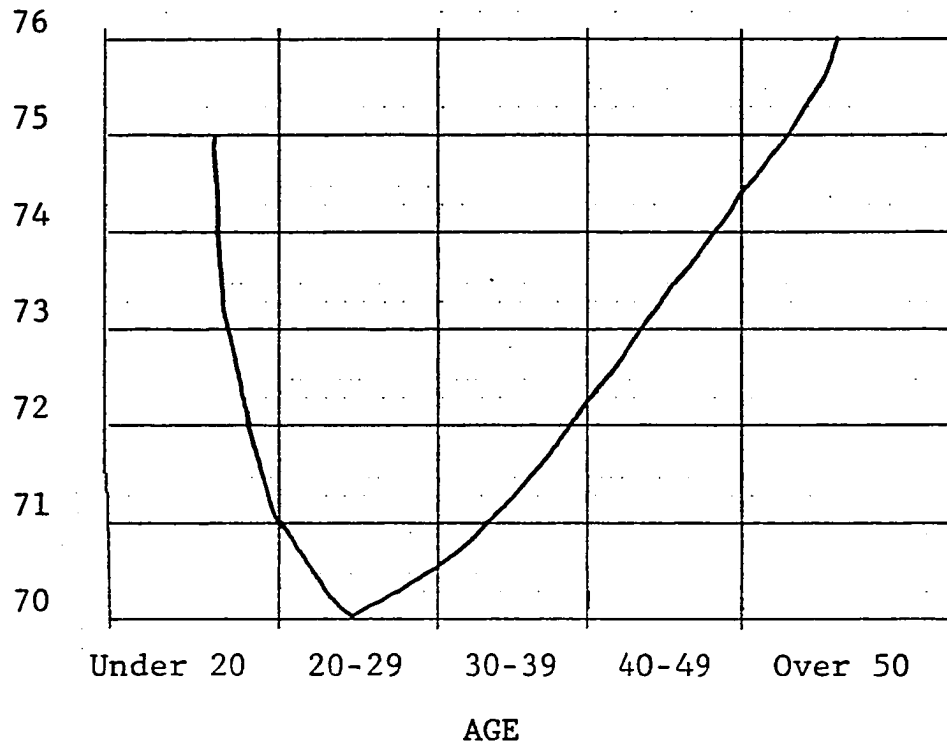
An examination of the data shows a remarkably consistent trend. In general, morale is high among young workers. It tends to go down during the first few years of employment. The low point is reached when the workers are in their middle and late twenties or early thirties. After this period, job morale climbs steadily with age (1957, pp. 5-6).

Benge and Copell (1947) provide the schematic view of this relationship in Figure 3-1. Herzberg posits that any new experience brings difficult transition experiences. The monotony of work as compared to the relative freedom of school, and family life starting for many, in addition to work pressures, provides possible explanation for the early drop.

Fournet, Distefano and Pryer cite Hulin and Smith as a key source for the linear model (1966, p. 169). The work of Hulin in his dissertation on A Linear Model of Job Satisfaction (1963) had roots in the work of Bernberg (1954). Bernberg's original study was among 800 blue collar aircraft

FIGURE 3-1

## RELATIONSHIP BETWEEN MORALE AND AGE



SOURCE: E. J. Benge and D. F. Copell, "Employee Morale Survey," Modern Management 7 (1947), pp. 19-22.



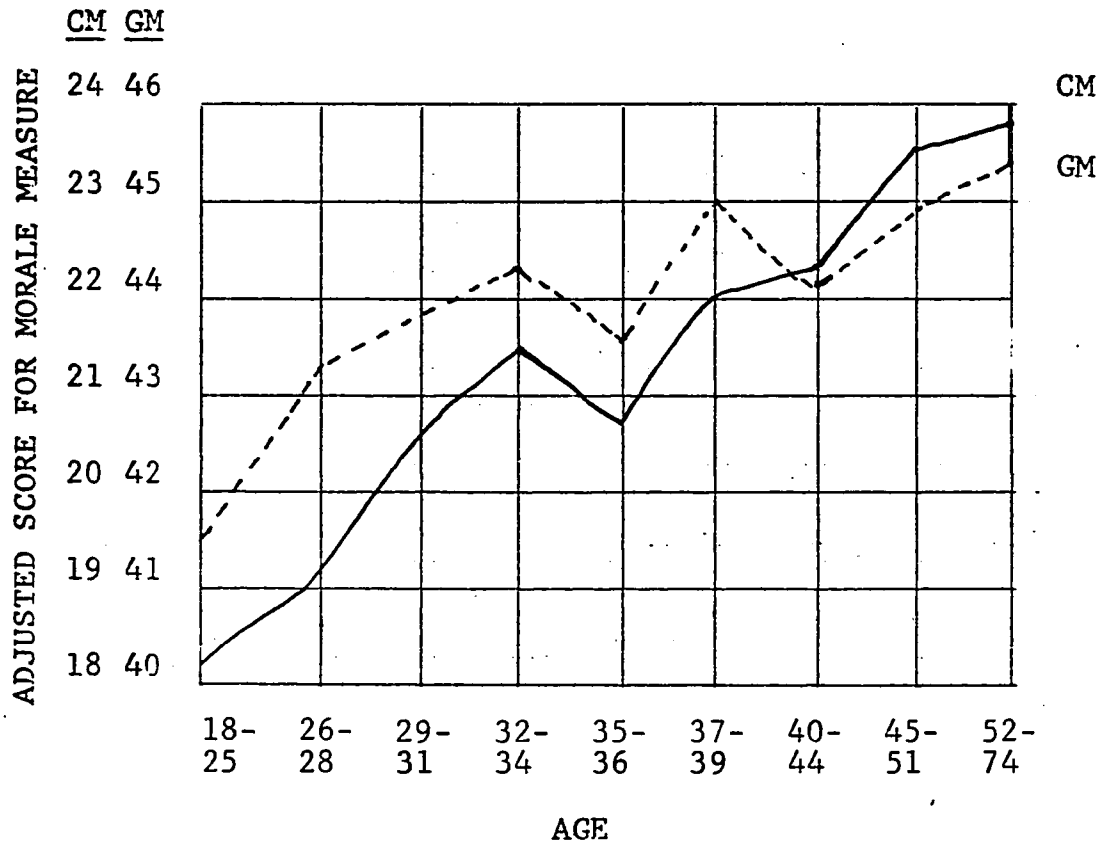
workers in California. He summarized his findings by stating, "...there are significant differences in mean morale scores attributable to age, when the influence of length of service is removed" (1954, p. 397). The results of the Bernberg study using two analyses of covariance are in Figure 3-2. From the figure it can be seen that the trend is not perfectly linear, but definitely shows a general trend with a linear tendency. The "GM" line represents a group morale measurement test developed by Bengtson and the "CM" line represents the results of a conventional attitude measurement device. cursory observation shows both follow the same directional path, although not identical in their scores.

Hulin and Smith, in a study of 185 male workers and 75 female workers employed by 2 different electronics plants, used multiple regression analysis to relate independent variables (age, job tenure, company tenure, job level, salary, and salary difference) to the dependent variables of the 5 aspects of the JDI. The Herzberg curvilinear relationship was set in equation form to be tested against a linear model equation. Using F-ratios, Hulin and Smith conclude, "...the U-Shaped relationship between age or tenure must be regarded with suspicion. Among the subjects investigated in this study we found no evidence to support this hypothesis" (1965, p. 215).

In a study of several thousand civilian ordinance employees, Vollmer and Kinney (1955) found a general linear

FIGURE 3-2

MORALE AS A FUNCTION OF AGE  
(Holding for the Effects of Tenure)



SOURCE: Raymond Bernberg, "Social Psychological Factors in Industrial Morale, III: Relation of Age to Morale," Personnel Psychology 7 (1954) Table 1.

relationship. Age and education level were controllable variables used in examining job satisfaction. In concluding, Vollmer and Kinney state, "For workers of grammar school, high school, or college background, the younger they are, the more likely they are to report dissatisfaction with their jobs. Conversely, again, it appears that the older the worker, the more likely he is to report high satisfaction with his job" (1955, p. 40).

Gibson and Kliën concurred with the linear model in their study of 2,067 blue collar workers from 18 different plants. Though noting that the relationship between age and job satisfaction was not completely linear, they state, "... the aging process by itself is associated with higher degrees of satisfaction" (1970, p. 419). At mid-life the direction of satisfaction changes slightly in the Gibson and Klein findings, but the trend is still supportive of the linear model.

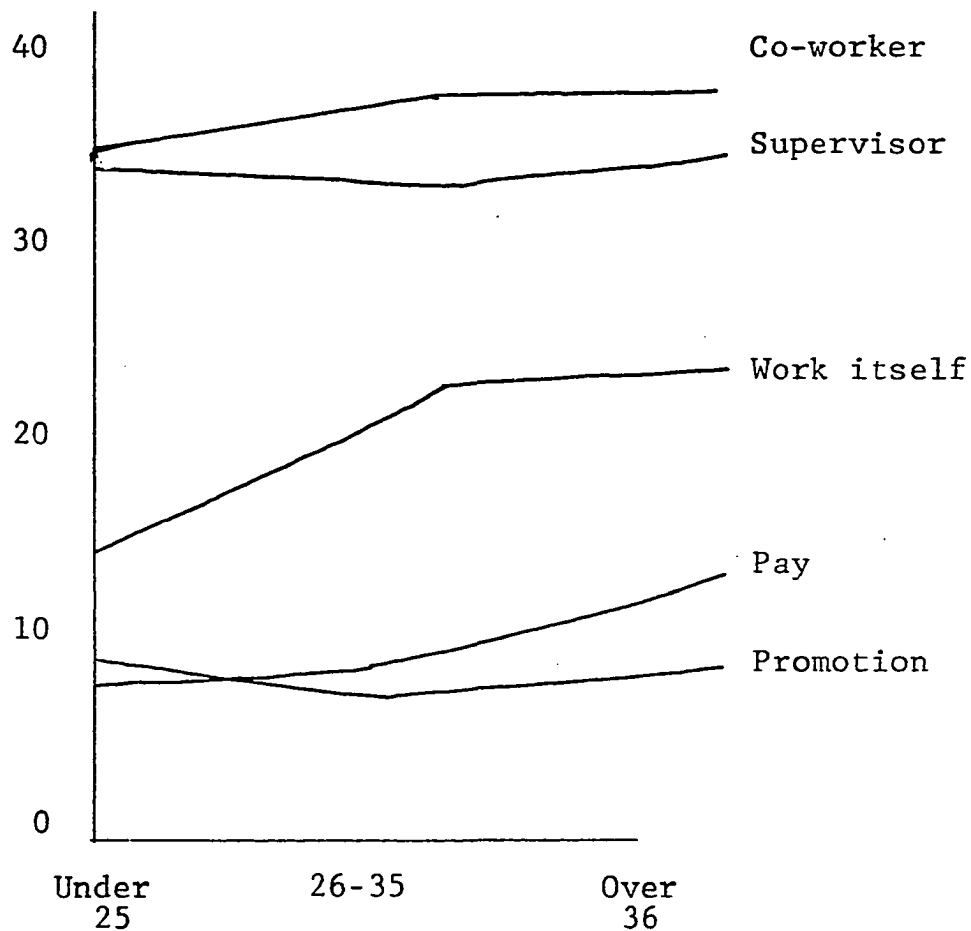
Calitz is supportive of the linear model. In researching management and non-management positions in two telephone companies, he found significant correlation between age and work satisfaction (1974). Summarizing, Calitz states that his findings "indicates that older workers are more satisfied with their work than are younger workers" (1974, p. 32). Altimus and Tersine, in a study of 63 blue collar males from one plant found positive linear relationship between age and overall feelings of job satisfaction (1973,

p. 56). The JDI was used as a measure of job satisfaction. The JDI subscale scores as related to age are shown in Figure 3-3. The subscale for "work itself" depicts the most distinct change in satisfaction over the age spans viewed and generally supports the linear model. The promotion subscale appears to be more associated with the U-shaped model. An explanation might be that promotion opportunities are never arriving fast enough in early career stages. Pay and co-worker subscale scores show general rise with age, while supervision is basically stable and then rising with age.

Wild adds an international factor to the age - satisfaction research with a study of 2,159 current female employees and 236 ex-employees of 7 electronics plants in the United Kingdom. His conclusion regarding age and satisfaction states, "...job dissatisfaction is relatively more prevalent among young current employees" (1970, p. 159). Clearly decreasing dissatisfaction is displayed in Wild's findings, lending credence to the linear model, in this case, related to female workers only.

Wrapping up the research supporting the linear model theory, Glenn, Taylor, and Weaver (1977), subjected data gathered in the General Social Surveys conducted by the National Opinion Research Center, to multivariate correlation analysis. The sample included 1,080 white males and 461 white females. Three different years of surveys were examined as separate samples. Glenn, et al., concluded,

FIGURE 3-3  
RELATIONSHIP OF JDI  
SCORES TO AGE



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SOURCE: Cyrus A. Altimus and Richard J. Tersine, "Chronological Age and Job Satisfaction: The Young Blue Collar Worker," Academy of Management Journal 16 (March 1973), pp. 53-66.

"...beyond reasonable doubt, that job satisfaction varies (or recently has varied) directly with age among females as well as males in the United States" (1977, p. 192).

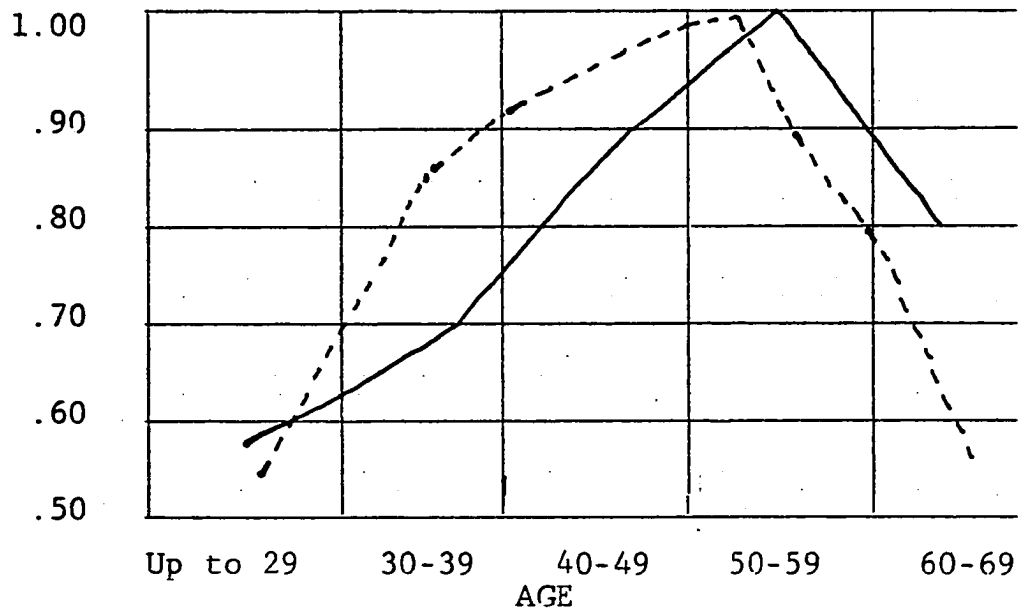
The studies cited in support of the linear model primarily dispute the early career decline in job satisfaction as spelled out by the U-shaped model. Hulin and Smith attempt to prove the linear model by disproving the U-shaped model. Bernberg, as well as Gibson and Klien, support the linear model using tenure as a co-variable. Vollmer and Kinney arrive at similar conclusions considering the education variable. Calitz and Glenn, Taylor and Weaver use correlation technique and arrive at linear results. Wild conducting international research supports the linear model. Altimus and Tersine, using the JDI subscales and age, found general linear relationship. Few of the studies concentrated on the pre-retirement years. The inverted-U model finds that satisfaction rises and then falls before retirement. Saleh has been an outspoken advocate of this model.

Saleh, sampling 85 males at managerial level, who were 60-65 years old, asked the subjects to respond to critical incidents of their past. When the pre-retirees' responses were analyzed, motivators provided the satisfaction in their middle age while hygiene factors provided the dissatisfaction. However, in later years of working life hygiene factors provided the satisfaction (Saleh, 1964, pp. 310-312). This factor of differing sources of satisfaction at differing age

levels led to Saleh and Otis' study of age and job satisfaction. The sample included 80 male managers between 60-65 years of age and 38 managers between 50-55. The subjects were asked to rank five age periods (up to 29, 30-39, and so on) as to when they had been (or expected to be) most satisfied with their work and least satisfied. The results are shown in Figure 3-4. It is clear from the graph that the respondents' answers to the questions show that satisfaction peaks in the fifties and then declines in the ensuing years. Thus, Saleh and Otis state, "Up to a point, these results support previous studies which indicated the increase of job satisfaction with age. This study has shown, however, that the increase in stated job satisfaction does not continue until retirement, but rather that it decreases in the terminal period, i.e., the five-years before mandatory retirement" (Saleh and Otis, 1964, p. 428). A study by Tuckman and Lorge (1954) ask senior citizens (ages 60-88) to complete a questionnaire ranking in different time spans of their lives, 21 aspects, one of which was job satisfaction. The outcome of their rankings was an inverted-U such as Saleh and Otis'. However, the peak of satisfaction came much earlier in life, coming in the twenties and dropping after that point. Saleh and Otis' respondents related peaking in the fifties. However, the overall graphic shape of the Tuckman and Lorge finding backs the inverted-U argument.

Three sources can be cited that do not distinctly fit

FIGURE 3-4

LEVELS OF JOB SATISFACTION  
(Two Age Groups)

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SOURCE: Shoukry Saleh and Jay Otis, "Age and Level of Job Satisfaction," Personnel Psychology 17 (Winter 1965) pp. 425-430.

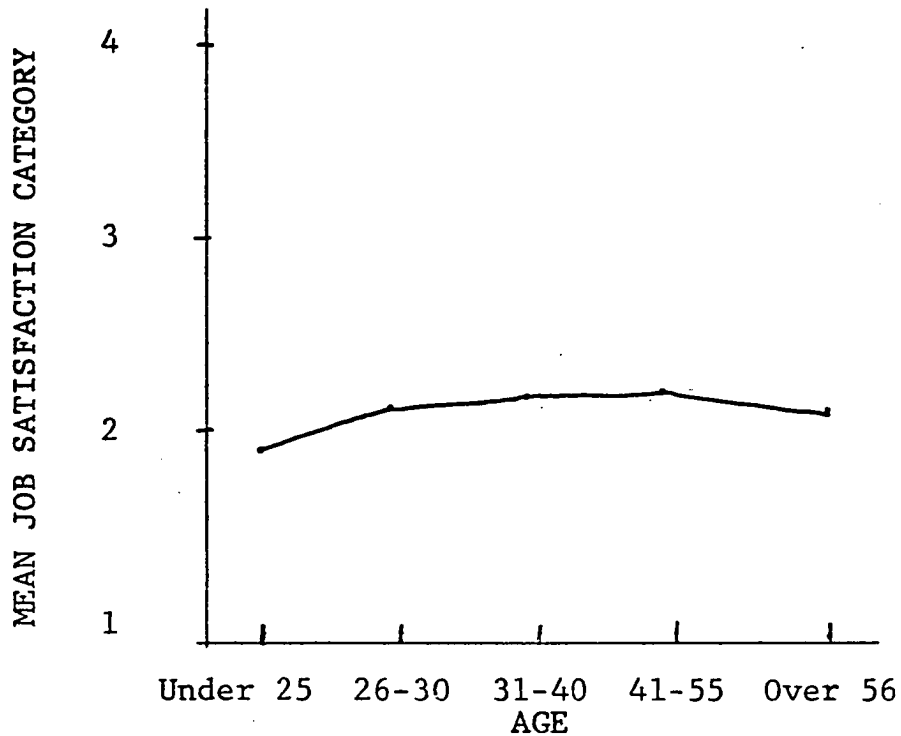


any of the three previously mentioned models. John Faris, in a dissertation study involving 1,200 white collar workers from four Federal government agencies and four private firms, found no conclusive support for any of the three models. Figure 3-5 show the Faris research results of the mean job satisfaction scores as related to age. As the graph indicates, satisfaction was found to rise early and then stabilize for the remainder of working life. In the summary of his findings, Faris states, "Job satisfaction was significantly correlated with age" (1976, p. 143). Faris thus concluded that age and satisfaction correlated, but not in the likeness of the three models.

Two other studies, Hall and Mansfield (1975) and Gruenfeld (1962), had findings not exactly paralleling either of the three models. Hall and Mansfield in a study of personnel in 22 research and development organizations, stated in their findings, "...it should be emphasized that the general age-related trends found here were all weak in terms of the percentage of variance explained by age" (1975, p. 209). Gruenfeld found that younger men's satisfaction was more dependent on wages and fringe benefits, whereas, older men's satisfaction was dependent on regular working hours, job security, freedom from stress, and independence (1962, pp. 310-313). Gruenfeld thus portrays age as a reflector of changing needs.

In summary, the age and job satisfaction

FIGURE 3-5

JOB SATISFACTION AS A  
FUNCTION OF AGE

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SOURCE: John Faris, "A Study of the Determinants of Job Satisfaction," (Ph.D. Dissertation, George Washington University, 1976).

relationship has met with contradictory findings. Marconi has stated, "The general consensus of researchers who have studied the effects of age on job satisfaction is that the percentage of highly satisfied workers increases with age" (Marconi, 1973, p. 23). This suggests the linear model view which seems to be the most common consensus of the later research. The seemingly only controversial time spans in all the research are early in career life and immediately preceding retirement. For the majority of the working life that falls between these extremes, the consensus is that a linear function exists between age and job satisfaction. The implications for management seem clear, that being it can be assumed that job satisfaction is rising with age for those in the middle 20-plus years of their working careers, and for those in the early or late years of career life, special attention need be given as satisfaction is suspect. We shall leave age at this point. Involved in some of the studies on age was the effect of education. The next section will contain a review of job satisfaction and its relationship to the education variable.

#### Education and Job Satisfaction

A survey of the literature by Herzberg shows five of thirteen studies citing a decrease in satisfaction with an increase in education, three studies showing the opposite, and five studies reporting no effect based on educational level. This research of the early studies is shown in Table

3-12. Herzberg, in summarizing the education and job satisfaction relationship states,

...some of the studies report that morale is lower among more educated than among less educated workers. It is possible that for some routine jobs this may be true. It is also possible that the highest morale of less educated workers is a function less of the amount of education than of age (1957, p. 17).

Marconi states, "A review of the literature that controls for educational differences shows that those researchers who find relationships between occupational level and job satisfaction also discover relationships between work satisfaction and educational level. Those who find no significant relationship between the former two variables also find no difference between education and satisfaction" (1973, p. 22). When occupation levels are controlled, a seemingly more meaningful relationship between education and job satisfaction can be analyzed. When this has been done, the findings are mixed. Vaughn and Dunn (1972a), in research conducted among 67 librarians, reported findings inconclusive as to the relationship between education and satisfaction. An earlier study by Sinha and Sarma (1962) also reported no significant relationship. However, Vollmer and Kinney found that younger workers and workers of higher education tend to be more frequently dissatisfied than older less educated workers (1955, pp. 38-39). Thus, the conclusion of a negative relationship between education and satisfaction. Klien and Maher (1966), in a study of managers, found that those

TABLE 3-12

HERZBERG'S LITERATURE REVIEW OF THIRTEEN  
STUDIES RELATING EDUCATION  
AND JOB SATISFACTION

Researcher	Date	Population	Direction of Satisfaction with Increasing Education level
Centers/Cantril	1946	National sample	Decrease
Mann	1953	Blue collar	Decrease
Neilson	1951	Core-makers	Decrease
Mossin	1939	Female sales clerks	Decrease
Scott/Hayes	1921	Routine task worker	Decrease
American Vocation Assoc.	1948	Home Economic teachers	Increase
Kessler	1954	Disabled veterans	Increase
Scott/Hayes	1921	Retarded workers	Increase
Ash	1954	Steel company workers	No change
Quayle	1935	Stenographers	No change
Kornhauser/Sharp	1932	Female factory workers	No change
Cain	1942	Factory workers	No change
Fryer	1926	Employment agency applicants	No change

SOURCE: Frederick Herzberg, et al., Job Attitudes: Review of Research and Opinion, (Pittsburg: Psychological Service of Pittsburg, 1957), pp. 15-16.

managers who attended college tend to be less satisfied with their pay than managers who have not attended college. In another research effort by Klien and Maher (1968), they studied first level managers in electronics manufacturing. Table 3-13 relates the mean scores of satisfaction with job based on college and non-college respondents. The college educated, when age is held constant, is consistently higher than the non-college educated for both high skill and low skill jobs. In their conclusion, Klien and Maher state that college educated are more satisfied with work itself, but less satisfied with pay than the non-college educated.

Three studies across occupational lines provide little in the way of conclusive findings. Baldi de Mandilovitch and Quinn (1975) used four national surveys of households, conducted by the University of Michigan Research Center in 1969, 1971, and twice in 1973, to give a global analysis of education-satisfaction relationship. Their conclusion was that there is no support for the assumption that job satisfaction rises with educational level attained. Neil Herrick, writing in "Who's Unhappy at Work and Why?" states, "Only when an individual with education beyond high school started earning \$10,000 per year, was he as satisfied with his work as his less educated brother" (1973, p. 4). Faris, in his study of 1,200 white collar workers in Federal government agencies and private concerns, found education level was not correlated with job satisfaction ( $r=.02$ ). In

TABLE 3-13

SATISFACTION WITH JOB FOR COLLEGE  
AND NON-COLLEGE EDUCATED

Cell Means				
	College		Non-College	
	Under 40	40 or Older	Under 40	40 or Older
High	7.12	6.10	6.59	5.78
Skill	(N=154)	(N=83)	(N=70)	(N=69)
Low	7.66	6.19	6.61	6.30
Skill	(N=38)	(N=16)	(N=57)	(N=125)
Analysis of Variance				
Source	F		P	
Education	4.86		.05	
Age	20.09		.01	

SOURCE: S. M. Klien and J. R. Maher, "Educational Level, Attitudes, and Future Expectations Among First Level Managers," Personnel Psychology, 21 (Spring, 1968), p. 50.

Table 3-14 the results of Faris' research are shown. cursory observation shows that for any given level of job satisfaction, the percents at different educational levels are fairly consistent. Only at the post graduate level does the high and low satisfaction differ from the other levels of education by any large amounts.

In summary, Herzberg found five studies stating job satisfaction decreased with increasing education, three studies stating satisfaction increased with increasing education, and five studies showing no difference. In other studies reviewed, Vaughn and Dunn (1972a), Baldi de Mandilovitch and Quinn (1975), and Faris (1976) give support to no difference, while Vollmer and Kinney (1955) and Klien and Maher (1966, 1968) (for satisfaction with pay) find a negative relationship between education and satisfaction. Klien and Maher (1968) found in satisfaction with work itself, a positive relationship with education. Herrick found that only after a given income level was the individual with education beyond high school as satisfied as those with less education. The evidence is thus divided. We will leave the education and job satisfaction relationship at this point and review the final demographic variable that being job tenure related to job satisfaction.

#### Tenure and Job Satisfaction

The majority of research pertaining to tenure and job satisfaction falls into two categories. One group of studies



TABLE 3-14  
JOB SATISFACTION BY EDUCATIONAL LEVEL

Job Satisfaction Category	Educational Level				
	High School	Under Graduate	Graduate School	Post Graduate	
Low	48 21.7%	148 23.3%	118 28.2%	17 13.2%	331 23.6%
Moderately Low	80 36.2%	197 31.0%	143 34.1%	42 32.6%	462 32.9%
Moderately High	51 23.1%	169 26.6%	83 19.8%	32 24.8%	335 23.9%
High	42 19.0%	121 19.1%	75 17.9%	38 29.5%	276 19.7%
STATISTICS	221 100.0%	635 100.0%	419 100.0%	129 100.0%	1404 100.0%

$$\chi^2 = 23.74 \text{ (p .01)} \quad G = +0.009$$

$$\text{Eta} = 0.110 \quad r = +0.02$$

SOURCE: John Faris, op cit., (1976), p. 107.

has found satisfaction starts high and then drops for a number of years, that to be followed by a rise in the remaining working life. The other group of studies finds a linear relationship, with satisfaction rising with tenure. Research efforts in these two categories, along with contradictory findings are found in Table 3-15. The table was composed primarily from reviews of the literature by Herzberg, et al., (1957) and Faris (1976). Group I, composed of studies where satisfaction starts high, then drops, and then rises follows very closely the U-shaped model of age and satisfaction. Arnold (1951) found that among printers, satisfaction was lowest in workers with tenure of 8 to 13 years, high among those who had been there up to 8 years, and highest among those who had been with the company over 13 years. Hull and Kolstad (1942) studied factory workers and McCluskey and Strayer (1940) studied teachers. Both found similar results in that early tenure (0-1 year and 0-4 years respectively) was satisfied, in middle years satisfaction dropped (1-5 years and 4-12 years respectively), and then longer tenure (5-10 years and over 12 years respectively) was the most satisfied. Faris supports the general proposition of decline early and then rise. Figure 3-6 relates the Faris findings in graphic form. As the graph points out, at around the one year point, satisfaction turned downward. In the 4 to 10 year period, satisfaction started back up. In concluding, Faris states, "...neither company nor job tenure

TABLE 3-15

SUMMARY OF RESEARCH ON RELATIONSHIP BETWEEN  
JOB SATISFACTION AND TENUREI. Satisfaction (morale) starts high, drops, then rises

Arnold, 1951  
Benge, 1944  
Bergen and Dean, 1939  
Hull and Kolstad, 1942  
Kolstad, 1944  
McClusky and Strayer, 1940  
Mann, 1953  
Faris, 1976

II. Satisfaction rises with tenure

American Vocational Association, 1948  
Cain, 1942  
Chase, 1951  
Harris, 1949  
Neilson, 1951  
Sheppard, 1967  
Hulin, 1963a  
Hulin and Smith, 1965  
Svetlik, Prien, and Barrett, 1964

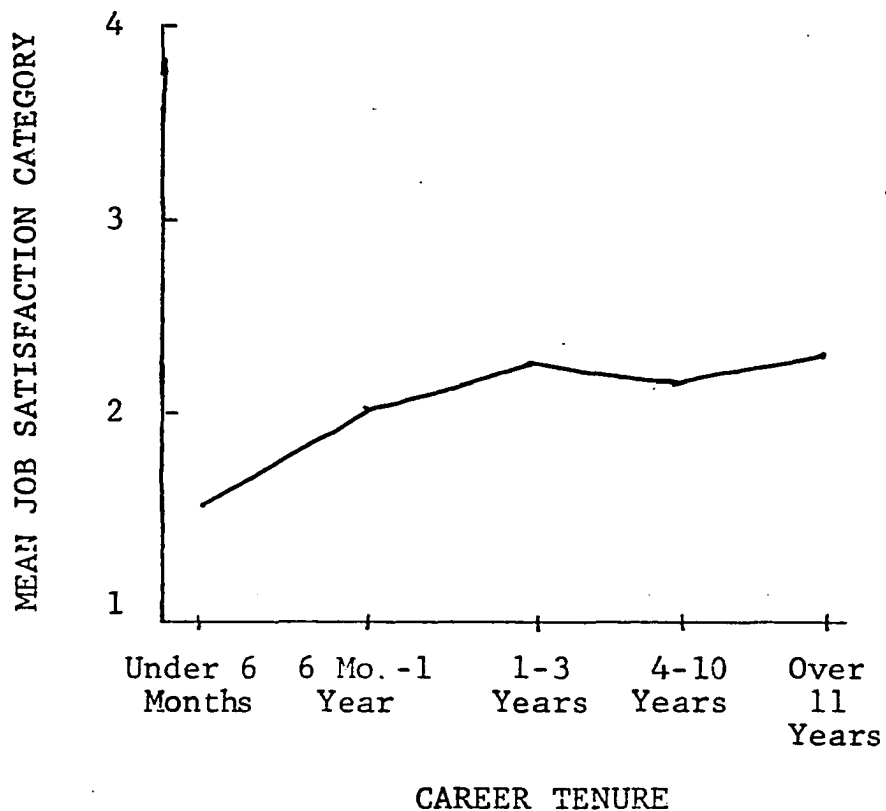
III. Contradictory

Lahiri and Choudhari, 1966 (No significance)  
Stott, 1935 (Negative)  
Ash, 1954 (No significance)  
Gibson and Klién, 1970 (Negative)

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SOURCE: Frederick Herzberg, op cit., (1957), pp. 11-13; and John Faris, op cit., (1976), pp. 47-48.

FIGURE 3-6

JOB SATISFACTION AS A FUNCTION  
OF TENURE

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SOURCE: John Faris, op cit., (1976), p. 107.

was significantly associated with job satisfaction" (1976, p. 143). So, even though his research found a relationship falling early in career and then rising, it was not significant in overall job satisfaction.

The second group (II) carried out research that resulted in a linear relationship between satisfaction and tenure. Exemplary of these findings are those of Sheppard (1967). In his study, Sheppard sampled 406 terminating employees of a national insurance company. The employees were divided into non-job related reasons for terminating and job related reasons for terminating. As was expected, those with non-job related reasons for leaving were, in most aspects of satisfaction measured, much more satisfied than the job-related terminators. When length of service on the job was measured, the longer the time the more satisfied their responses to job factors (1967, p. 570). The Sheppard study would thus suggest satisfaction increasing with tenure.

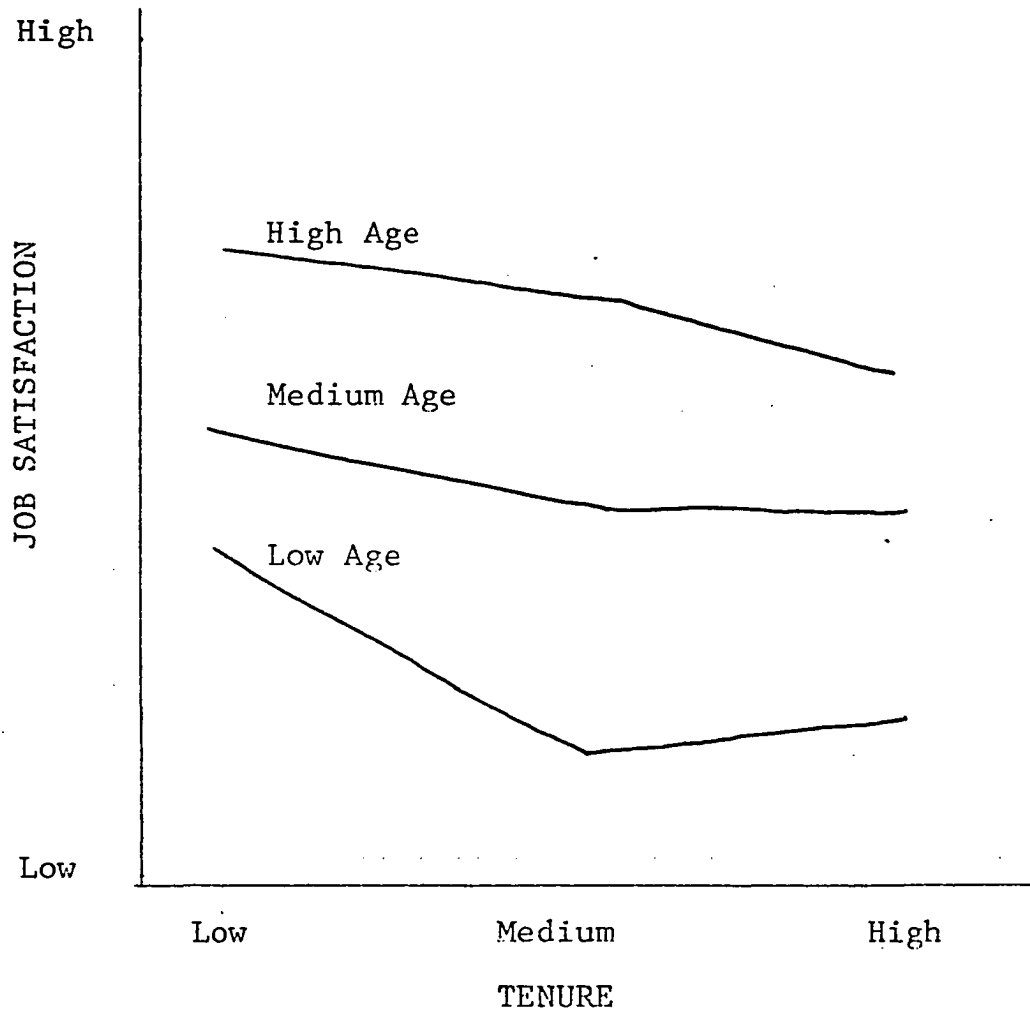
Herzberg presents a note of caution about the studies he reviewed in this second group. He cites the Neilson (1951) study as an example, pointing out that there were no subjects with less than five years employment. Therefore, the early drop found by other researchers did not have a chance to happen. Herzberg goes on to state that other studies might have "reported the relationships using a standard correlation technique which could mask an early lowering of morale in an otherwise positive trend" (1957, p. 12).

The third group consists of contradictory findings, that being either a negative relationship between tenure and satisfaction or no relationship. Stott (1935) found a negative relationship between tenure and job satisfaction. It is explained by the fact that he straddled falling and rising periods, by only sampling the first 10 years of career life.

Gibson and Klien examined tenure by three age categories. Figure 3-7 relates their findings. As can be seen from the graph, the low age group dropped and then moderately climbed as low age with high tenure were examined. The low age group was the lowest of the three groups in satisfaction regardless of amount of tenure considered. The middle aged group might be described as dropping and then stabilizing. The high age group can be characterized as one of steady drop in satisfaction from those with low tenure to those with high tenure. Gibson and Klien concluded that there was a significant negative relationship between tenure and overall job satisfaction (1970, p. 424).

In summary, there appears to be widespread findings that at some point after early career, tenure and satisfaction are positively linearly related. Early career lacks concurrence as to whether and/or how long the drop in satisfaction occurs before the positive rising relationship begins. At this point we will leave the variables associated with job satisfaction and look toward the conceptual merging of job satisfaction and central life interest. The final section of

FIGURE 3-7

RELATIONSHIP BETWEEN TENURE AND  
OVERALL JOB SATISFACTION

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SOURCE: James L. Gibson and Stuart M. Klien, "Employee Attitudes as a Function of Age and Length of Service: A Reconceptualization," Academy of Management Journal 13 (December 1970), pp. 411-425.

this chapter will address that issue.

### Central Life Interest and Job Satisfaction

Multitudinous variables have been empirically tested in quest of an understanding of job satisfaction. Basic to most of this research has been an assumption of a homogeneous group of workers who believe that work is important (Dubin, 1973, p. 1). However, that assumption does not allow for the fact that much of the worker's response to job satisfaction inquiry may be in direct relationship to where his "interests" in life lie! For example, Patricia Smith, in discussing problems of properly understanding job satisfaction measurements, hypothesized that "...above a certain minimum, for example, a given annual income is a positive source of satisfaction, a source of dissatisfaction, or irrelevant to an individual, depending upon what other jobs might pay, upon what other people of comparable training, skills, and experience are obtaining (in the same labor market), upon what the same individual has earned in the past, and upon the financial obligations he has assumed and expenditures to which he has become accustomed" (Smith, 1963). The importance of pay to the individual might be a product of how pay reflects management's attitude toward his work (if his primary interest is job-oriented), or conversely, it might reflect the ability to meet "the expenditures to which he has become accustomed" (if one is non-job-oriented in his interests). Since the working individual spends



approximately equal time between work and leisure it seems plausible to view him/her as one complex being, whether in a work or leisure world. Thus, the point at which interests of workers lie seems to be an important factor in job satisfaction analysis. Sayles and Strauss point out the shift from rural - communal style of work - social and - leisure life of a few years back, to a commuter style megopolis of today, and state, "Today, since work and play occupy separate spheres in our lives, we feel under pressure to decide which is most important" (1966, p. 27). Thus, it seems possible that a deeper understanding of the relationship of job satisfaction to central life interests will add enlightenment to the quest for better understanding the worker of today. The work of Brown (1968), Miskel and Gerhardt (1974), Starcevich (1971), and Dubin, Champoux, and Stampfl (1973) provide a start in this direction.

Brown (1968), in a study of 475 employees in a large west coast firm, concluded the non-job-oriented cannot simply be characterized as dissatisfied. Brown used Dubin's CLI and a single question, "global" measure of job satisfaction. In analyzing the non-job-oriented, Brown found that the greatest percentage chose an ambivalent job satisfaction response.

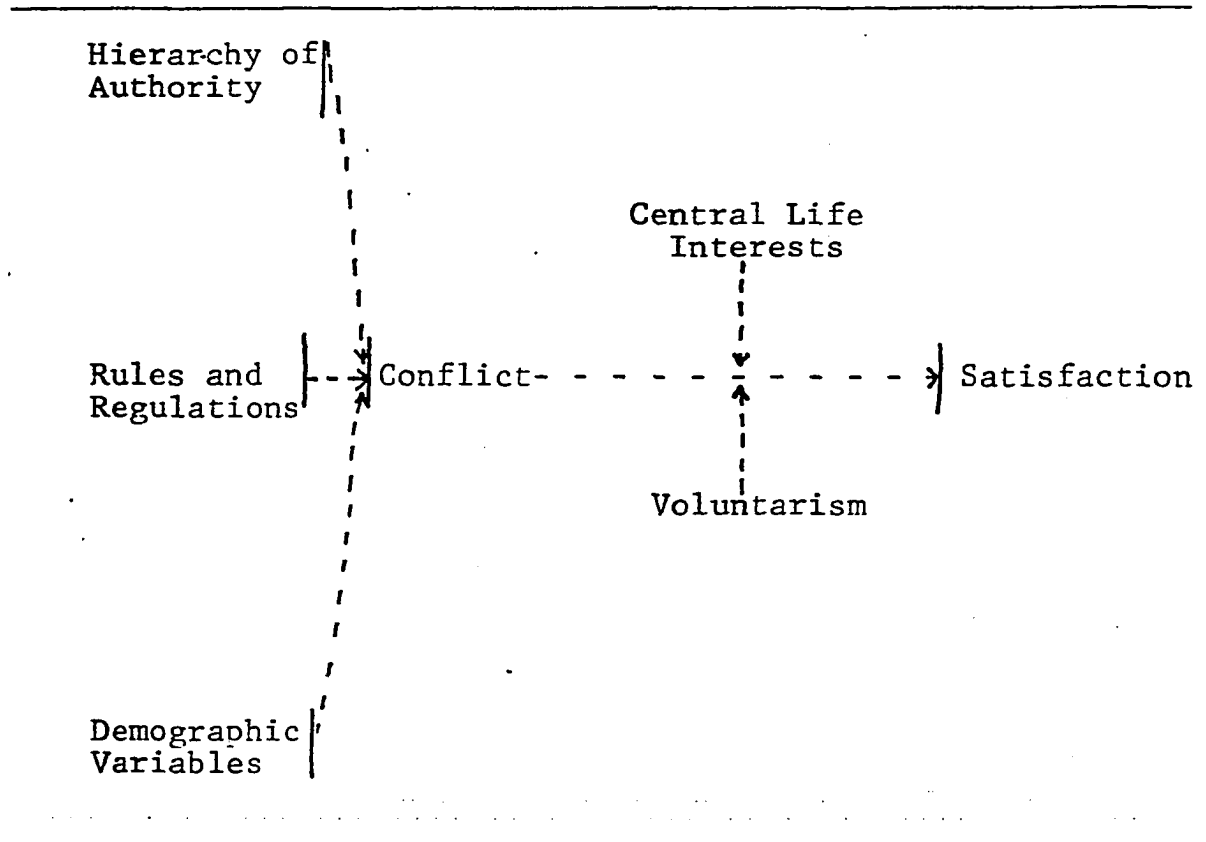
Miskel and Gerhardt (1974) conducted their research among Kansas school teachers. They used their own instrument to measure job satisfaction, central life interest,

voluntarism, conflict, and perceived bureaucracy. The instrument was a 12-item questionnaire with 5-point Likert type response scales. The theoretical model to be tested by the Miskel and Gerhardt research is presented in Figure 3-8. Central life interest and voluntarism act as intervening variables between conflict and satisfaction. Voluntarism is defined as the perceived economic freedom to work or not to work (1974, p. 87). The research effort concluded, "voluntarism and central life interest are positively correlated with satisfaction while conflict is negatively correlated with satisfaction" (1974, p. 92). As in the Brown study, the Miskel and Gerhardt global measure of job satisfaction provides a general directional conclusion as to the relationship between satisfaction and central life interest being positively correlated, but does not specify facets of job satisfaction.

The fusion of Herzberg's dual-factor theory and the CLI was the topic of Starcevich's (1971) dissertation work. In studying a Southwest manufacturing firm, Starcevich divided his sample into three organizational positions, first line managers, middle managers, and professional employees. Regardless of organizational position, the findings point to intrinsic job factors as the most important sources of job satisfaction for most job-oriented individuals (1973, p. 113). For job-oriented individuals, achievement, work itself, and use of best abilities were the greatest source of satisfaction.

FIGURE 3- 8

## MISKEL AND GERHARDT THEORETICAL MODEL



SOURCE: Cecil Miskel and Ed Gerhardt, "Perceived Bureaucracy, Teacher Conflict, Central Life Interest, Voluntarism, and Job Satisfaction," The Journal of Educational Administration, XII, 1 (May, 1974), p.88.

Only promotion (extrinsic) ranked among the top five sources of dissatisfaction. The non-job-oriented first line managers were the only groups to rank any extrinsic factors among satisfiers. They put co-workers and supervision fourth and fifth respectively. However, overall the non-job-oriented gave intrinsic factors as sources of both satisfaction when present and dissatisfaction when absent. Starcevich states, "Contrary to Dubin's contention that the major gratification the job provides the non-job-oriented person is money for satisfying his non-job-interest, the job factors Merit Increases and Employee Benefits were found to be among the five least important job factors for the non-job-oriented respondents" (1973, p. 113). He goes on to state, "The data presented here indicates the line of reasoning (Dubin's) to be erroneous." Two points might be suggested here, first, Dubin's study was with industrial employees while Starcevich sampled managers and professionals. Though occupational significance is not totally understood, indications of differing results from the occupational differences would have been predictable. Second, the use of the Friedlander instrument, as compared to other instruments, might affect measured outcomes.

Dubin, Champoux, and Stampfl (1973) brought Dubin's rich knowledge of the CLI and the time-tested JDI document together in a study of female bank employees, male blue-collar telephone company employees, and female telephone

company clerical employees. The JDI and CLI instruments were completed by all participants. Two distinctly different, but complementary analyses were conducted. The first, an overall test of the significance of the relationship of the CLI and job satisfaction (taking into account all five JDI variables simultaneously). The discriminant analysis was performed on the three samples separately using the procedure described by Overall and Klett (1972, Chapter 10) (Dubin, Champoux, and Stampfl, 1973, p. 6). The results are shown in Table 3-16. Of most importance in contributing to job satisfaction is the "work" subscale with coefficients of .94, .98, and 1.03 for the three samples respectively. Promotion opportunities contributed for blue-collar telephone company males, while other JDI factors contributed very little. When the means of the discriminant functions for each CLI group [job-oriented (JO), non-job oriented (NJO), and no preference (NP)] were computed, blue-collar males and bank clerical females followed the predicted pattern (Dubin, Champoux, and Stampfl, 1973, p. 17). The mean scores for JO, NP, and NJO for blue-collar males were 2.91, 2.46, and 1.99 respectively. Clearly the JO was much higher than the NJO with NP falling at mid-range. For clerical bank females the JO mean score was 3.60, NP mean score was 3.16, and the NJO mean score 2.62. Again, the JO were much more satisfied than the NJO. For the third sample, the outcome was basically the same, except for NP. For telephone company clerical females, the mean score of JO

TABLE 3-16

STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS  
FROM OVERALL JDI AND CLI SCORES

Job Descriptive Index Scale	Telephone Company		Bank
	Blue-Collar Males	Clerical Females	Clerical Females
Work	.94	.98	1.03
Promotion Opportunities	.32	-.63	-.06
Pay	-.16	.01	-.36
Supervision	-.09	.20	.19
Co-workers	-.06	.26	-.10
Total Discriminatory Power <sup>a</sup>	6%	8%	5%
Total Discriminable Variance <sup>b</sup>	33.19	16.16	24.96
d.f.	10	10	10
	p<.001	n.s.	p<.01
N	430	144	336

SOURCE: Robert Dubin, J. E. Champoux, and J. Stampfl, op. cit., (1973), p. 16.

<sup>a</sup>Total discriminatory power was measured by the Omega statistic described by Tatsuoaka (1970).

<sup>b</sup>The total discriminable variance computed by the procedure in Overall and Klett (1972, Ch. 10) is approximately distributed as a chi-square variate with degrees of freedom as noted.

was 3.55, for NP was 3.56, and for NJO the mean score was 2.74. A clear spread existed between JO and NJO, although no difference was found between NP and JO. Based on the work of Tatsuoka (1970), Dubin, et al., found the total discriminatory function to be 6% for blue-collar males and 5% for clerical bank females (1973, p. 8). Thus, 5%-6% of the job satisfaction variability is explained by the respondent's CLI orientation. That is not a large amount, and yet, when one considers the tremendous complexity of job satisfaction study, a 5%-6% amount seems like an amount worthy of continued investigation. The discriminatory function for the telephone clerical females was determined to be not significant.

Dubin's second statistical analyses consisted of a bivariate study to determine if CLI orientation was more strongly related to any of the individual JDI scales separately than it was to the JDI entotal. Justification for this was based on Cramer and Bock (1966), since it has been established through discriminant analysis that CLI is significantly related to the total set of JDI scales (1973, p. 9). A gamma coefficient, based on the work of Goodman and Kruskal (1954), was used to measure the strength of relationship between CLI orientation and JDI subscale. According to Dubin, the size and sign of gamma is interpreted in approximately the same way as a correlation coefficient (1973, p. 9). Table 3-17 relates the percentage of

TABLE 3-17

INDIVIDUALS IN EACH CENTRAL LIFE INTEREST CATEGORY  
WITH LOW, MIDDLE, OR HIGH LEVELS OF  
SATISFACTION AND GAMMA SCORES

Job Description Index Scale	Level of Satis- faction	Blue-Collar Males Telephone Company				Clerical Females Telephone Company				Clerical Females Bank			
		$\bar{X}$	NJ*	NP	J	$\bar{X}$	NJ	NP	J	$\bar{X}$	NJ	NP	J
Work	Low	18.5	51%	27%	11%	16.3	46%	27%	13%	21.5	48%	27%	17%
	Middle	34.5	23	38	37	31.8	35	38	53	35.8	29	40	33
	High	45.4	26	35	52	45.1	19	35	33	45.5	23	33	50
		p<.001		$\gamma=.37$		$\gamma=.29$				p<.01		$\gamma=.32$	
Promotion	Low	3.3	48	40	31	3.4	39	40	33	12.7	48	38	32
Opportunities	Middle	17.5	26	31	26	17.6	27	26	27	35.8	19	25	28
	High	42.8	26	29	43	41.4	35	34	40	52.4	32	37	40
		n.s.		$\gamma=.18$		$\gamma=.04$				n.s.		$\gamma=.12$	



TABLE 3-17 (Continued)

Pay	Low	3.9	40%	44%	39%	7.9	46%	39%	27%	11.3	48%	37%	33%
	Middle	12.9	33	34	38	21.2	27	31	40	26.6	32	25	42
	High	31.7	27	22	23	36.0	27	30	33	40.5	19	38	25
		n.s.		$\Upsilon = -.02$				$\Upsilon = .14$		p<.05		$\Upsilon = .05$	
Co-workers	Low	27.0	29	29	23	21.6	35	28	20	24.8	32	26	22
	Middle	42.4	35	33	28	38.1	31	27	33	41.7	32	36	27
	High	50.6	36	38	49	50.0	35	45	47	50.8	36	38	52
		n.s.		$\Upsilon = .10$				$\Upsilon = .15$		n.s.		$\Upsilon = .17$	

SOURCE: Robert Dubin, J. E. Champoux, and J. Stampfl, op. cit., (1973), pp. 18-19.

Note. -Significance tests were not performed for the Clerical Female sample from the telephone company since the discriminant analysis did not show a significant overall relationship between central life interests and job satisfaction. The significance tests for the remaining two samples were based on Chi-square.

\*NJ = Non-job-oriented; NP = No Preference; J = Job-oriented

individuals in each CLI category and the resulting gamma and its significance. The respondents were categorized as high satisfaction if his/her score on that scale was greater than one-half a standard deviation above the mean for that scale. Respondents were placed in the low category if their scores on that scale was greater than one-half a standard deviation below the mean for that scale. All other respondents were placed in the middle category (Dubin, Champoux, and Stampfl, 1973, p. 7). From the table, the JDI work subscale is the strongest in its relationship to CLI orientation ( $\gamma = .37, .29, .32$  respectively). Job-oriented workers are more satisfied with "work" than non-job-oriented, while workers stating no preference on the CLI approach the one-third split between the three levels of satisfaction.

Dubin, et al., conclude from this finding that "the general level of job satisfaction is highest among individuals with a work-oriented CLI: lowest among workers with a non-job-oriented CLI: and intermediate among workers with no preference in CLI: (1973, p. 10). He proceeds on to state, "The single element of the work environment that strongly differentiates the level of job satisfaction among the CLI groups is the work itself" (1973, pp. 10-11). If this continues to hold true, with added empirical evidence, then managers will have a dichotomized problem, enriching work may "turn on" the job-oriented, but may be viewed with apathy by an instrumentally-oriented individual to his work environment.

With this fusion of the JDI and CLI instruments, with numerous uses to provide some confidence of acceptance, and with a desire to bring to the small business sector insight into its personnel, our attention now proceeds to the methodology of this research effort.

## CHAPTER IV

### METHODOLOGY

#### Introduction

The purpose of this empirical study is to explore central life interest and job satisfaction in the small business environment, and to test the relationship of central life interest and job satisfaction when considering the demographic variables of sex, age, tenure, and education. A secondary purpose will be to verify the work of Smith and Dubin. With guarded optimism the author hopes that significant findings might aid in dealing with a seemingly troublesome area for most small business owners, that being personnel. It is this researcher's belief that "shrouded" in personnel problems is a lack of understanding of the attitudinal makeup of the small business employee. With the aid of time-tested instruments by Dubin and Smith, hopefully, research findings can provide some new light on some basic personnel problems.

In the remainder of this chapter, the following topics

will be discussed: sample, instruments of measurement, data collection, data analysis, and statistical analysis.

### Sample

This research effort seeks to explore employees' attitudes toward their work environment in a selected small business community. Conducting empirical investigative work in small business entails two very basic problems. First, the small number of employees in the typical small business organization means much more difficult logistical problems in collecting data. If one goes to the large organization, secures management approval, and has an instant population within four walls, the data collection seems to be more feasible and popular. The second problem in securing small business input is related to time. In most larger organizations, duties can be shifted or covered to allow for special intrusions, such as completing questionnaires. In the small business organization, many times there is no one to "cover." This research effort was determined to not let these problems stifle the quest for knowledge concerning the small business world.

Because of this researcher's contacts, knowledge, and intense interest in the Bethany-Warr Acres (Oklahoma) small business community, this population was chosen for the current research effort. Time and financial consideration precluded this researcher from expanding this sample to other

geographic areas. However, the author possesses no resolve to proclaim the findings contained herein universal, and therefore, the sample seems to meet well the intentions of this research. Each city (Bethany and Warr Acres) requires businesses to purchase an annual franchise license. The franchise license roster from each city became the source of a listing of the population to be sampled. Contained on the Bethany Franchise License roster was 475 organizations. The Warr Acres License roster contained 363 organizations. All organizations not complying with the small business definitions, discussed in Chapter II, were eliminated. When uncertainty existed as to whether a firm qualified or not, a telephone contact was made to categorize the organization. An added operational definition that was used for this research effort was to sample only those organizations with two or more full-time employees. This criterion was used so that the co-worker scale on the JDI would have meaning, as well as, certain CLI questions which pertain to fellow workers. One hundred and two organizations became a part of the final sample.

Of the 440 employees participating, 139 were retail, 251 were service, 20 were manufacturing, 14 were contract construction, 1 was wholesaling, and 1 was in a miscellaneous category. All classifications were based on the Standard Industrial Classification system.

Four hundred and fifty-six subjects participated in

completion of the questionnaires. (Sixteen were voided leaving 440 useable questionnaires). The sample consisted of 289 females and 151 males. The average education level was 12.3 years. Average length of time with the company was 3.5 years. Average amount of time in related type work was 4.4 years per employee. The average reported earnings per employee was \$494 per month (\$2.81 per hour). Using the mid-point of each age category in averaging the category, the average age was 33.1 years.

A brief review of the socioeconomic characteristics of the Bethany population (21,785) is included at this point to provide background for the population to be sampled. Based on 1970 U.S. Census of Population data, the following figures are reported:

TABLE 4-1  
AGE (PERCENT) DISTRIBUTION

Category	Bethany	U.S.
Under 5	8.4	8.4
5-14	21.7	20.1
15-24	19.9	17.4
25-34	15.8	12.2
35-44	13.3	11.4
45-54	9.1	11.4
55-64	5.5	9.2
65-Over	5.8	9.9
	<u>100.0</u>	<u>100.0</u>

TABLE 4-2

FAMILY INCOME  
(Percent of Family Units)

<u>Income</u>	<u>Bethany</u>	<u>U.S.</u>
Less than \$2,000/year	3.3	19.3
\$2,000 - \$4,999/year	9.8	20.1
\$5,000 - \$9,999/year	34.5	34.1
Over \$10,000/year	<u>57.4</u>	<u>26.5</u>
Median Family Income	<u>\$10,353</u>	<u>\$6,505</u>

TABLE 4-3

EDUCATION, 25 YEARS OLD AND OVER  
(Percent)

<u>Years of Education</u>	<u>Bethany</u>	<u>U.S.</u>
K-6	1.2	9.1
7-11	29.3	41.6
High School	35.0	29.7
1-3 Years of College	19.0	11.5
4 Years of College	<u>15.5</u>	<u>8.1</u>
Median Years Completed	100.0	100.0



TABLE 4-4

LABOR FORCE  
(Percent)

<u>Occupation</u>	<u>Bethany</u>	<u>U.S.</u>
Technical and Professional	16.6	14.5
Managers and Proprietors	11.3	8.1
Clerical	22.1	7.0
Sales	10.4	17.8
Craftsmen	13.6	13.9
Operatives	10.9	18.0
Service Workers	12.2	12.8
Farmers, Include Laborers	.2	3.1
Laborers, Except Farm	2.7	4.8
	<hr/> 100.0	<hr/> 100.0

As can be seen from the tables, the age distribution is very similar to nationwide percents, except in the older age groups where Bethany figures are 4% under in the two older categories. Family income in Bethany is higher than national averages, showing significantly fewer family units at the lower income level and significantly more in the over \$10,000 category. Overall, the education level is higher in Bethany than national averages with those having some college or completed being significantly higher (34.5% in Bethany as compared to 19.6% nationally). The occupational breakdown does not show glaring differences, except in the clerical category, where Bethany has 22.1% involved in this type work as compared to 7% nationally. From cursory observation, Bethany does possess some deviations from socioeconomic national averages, but the population does not appear to be highly differentiated overall from national figures.

Warr Acres is a city that is contiguous with Bethany. It is about one-half the size in population, but this author knows of no distinguishing features that would not allow the two cities to be considered a homogeneous population.

#### Instruments of Measurement

Two instruments have been used as a part of this research effort, the Job Description Index and the Central Life Interest questionnaire. These two widely used instruments will briefly be reviewed again in the ensuing paragraphs, to complement previous discussion in Chapters II.

and III.

### Central Life Interest Questionnaire

Robert Dubin's central life interest questionnaire is a 32-item questionnaire developed to measure the worker's "expressed preference for a given locale or situation in carrying out an activity" (1956, p. 134). The complete questionnaire can be found in Appendix A. The 32 questions are subdivided into 4 groups. They are: informal, general, organizational, and technical. The subjects respond on each question to one of three possible choices. One of the choices is a job-oriented (JO) response, one choice is a non-job-oriented (NJO) response, and the third choice is a no preference response (NP), i.e.,

When I am worried, it is usually about

<u>JO</u>	how well I am doing in my career
<u>NP</u>	just little things
<u>NJO</u>	things that happen at home

A review of the numerous uses and the criticisms of the CLI can be found in Chapter II.

### Job Description Index

Patricia Smith and associates developed the Job Description Index in a very detailed and thorough research effort in the early 1960's. A summary of the development is found in the previous chapter. The JDI is a measure of specific aspects of jobs, as opposed to the global measurement of job satisfaction. Sub-scales are developed for pay, work, supervision, promotion, and co-workers. Supervision was

not used in this research, to avoid the possible intimidation an employee might feel from being honest about his supervisor, which most often in this research effort was the owner.

The questionnaire was given in booklet form with each of the subscales being on a separate page. The work and co-worker subscales contained 18 adjectives each, while the pay and promotion subscales contained 9 adjectives each. The complete questionnaire can be found in Appendix B. The respondent is asked to identify each adjective with "y" if it describes his/her job, "n" if it does not describe his/her job, and "?" if he/she could not decide. Yes responses to positive adjectives and no responses to negative adjectives are considered a sign of satisfaction with that job aspect. An example of the questionnaire is provided below:

Co-workers

<u>y</u>	Stimulating
<u>n</u>	Boring
<u>n</u>	Slow
<u>y</u>	Ambitious...

The filled in responses, illustrated above, would all be scored as satisfied responses.

Validation of the JDI was conducted extensively by Smith, et al., (1969, Chapter 3). As cited in the previous chapter, numerous others have cited convergent and discriminant validity of the JDI instrument, including Vroom (1964), Robinson, Athanasion and Head (1969), Quinn and Kahn (1967), Milutinovich (1971), Gillett and Schwab (1975), Evans

(1969), and Roberts, Walter, and Miles (1971). Internal consistency, as reported by Smith, et al., ranged from .80 to .88 for the five subscales (1969, p. 74).

### Data Collection

The initial phase of data collection was a personal letter to each business owner, developed from the Franchise License rosters mentioned previously. The letter provided the introduction of this author and a brief statement of the cooperation being sought. A copy of the letter, one being sent to Bethany firms and one being sent to Warr Acres firms, can be found in Appendix E. At the conclusion of the letter a statement was made to the effect, "In the near future, I, or one of my associates will contact you and give you opportunity to participate in this project."

In deciding on the methodology of data collection, the issues of how to administer, where to administer, and anonymity were considered. Williams, Seybolt, and Pinder (1975, pp. 93-103) address these issues, among others. The issue of how to administer was one of mail versus personal contact. A review of the literature, namely Landy and Bates (1973), Berdie (1973), Veiga (1974), Etzel and Walker (1974), and Huck and Gleason (1974), and this researcher's personal experience with mail surveys, prompted the decision to make personal contacts. The belief was that a greater response rate in a shorter time span would be superior to the possible necessity to back track at a future date.

The second issue was whether to seek small business owner's permission for company time for employees to complete the questionnaire or ask him to allow the employees to take the questionnaires home and return the next day. It seemed likely that having employees take the questionnaires home would increase the owner's willingness to participate in it because company time would not be involved. However, it seemed quite possible the drop in response rate of getting questionnaires returned would negate the time put into the personal contact. Therefore, the decision was made to ask for company time to complete the questionnaires.

The third issue, that of anonymity, is a vital consideration where attitude responses are being solicited. Even more critical is the issue in the small business setting, where the distance between owner/supervisor and employee is very small. For this reason, the supervisor scale of the JDI was not administered. This exclusion was to eliminate requiring the employee from having to make direct comments about his supervisor, who in most cases was the owner. Also, anonymity was guaranteed in the instructions and an envelope was given to the respondent which could be sealed immediately upon his/her completion of the questionnaire.

In preparing for questionnaire distribution, a meeting was held with 19 associates who were to later make personal contact with each small business. Each associate was oriented to the questionnaires to be used in the research

project. These documents consisted of a one-page demographic questionnaire which was printed as the first page of a booklet containing the CLI. A separate questionnaire booklet contained the JDI. The CLI questionnaire was on blue paper, while the JDI was on white. This was done in an attempt to color code the instruments, so as to give as clear a set of instructions as possible. Both documents were enclosed in a number 10 envelope with printed instructions on the outside. The printed instructions, as shown on the front of the envelope, are listed below:

TO: \_\_\_\_\_

Your employer has graciously consented for the members of your firm to participate in this research project. Enclosed in this envelope are two standardized questionnaire booklets. The blue booklet is related to central life interest. Please fill it out first. The white booklet is related to job description. Both questionnaires have been used in many national studies. Your cooperation in answering the questions will be greatly appreciated.

DO NOT put your name on any of the forms! Your name will not in any way be associated with your response.

I am carrying out the research as a part of my dissertation requirement at the University of Oklahoma.

I thank you for your honest responses. You are an important part of this research effort. Please seal the envelope and return to your employer when you have finished. Your sealed envelope will be picked up from your employer this afternoon by one of my associates.

THANK YOU,

Larry W. Mills  
Professor of Management  
Bethany Nazarene College

After familiarization with the instrument package, the associates were then instructed on how to approach the

business owners. After introducing himself and the project, and receiving a willingness to participate on the part of the owner, the associate was to check to see if the business had at least two employees working in excess of 30 hours per week. If this condition was not met, the owner was to be thanked for this time and the firm by-passed. Questionnaires were to be distributed in the morning, and the owner was asked if the completed responses could be picked up that afternoon. The intent of this approach was to minimize the threat to the worker of his superior having access to the completed responses for a lengthy period of time. Also, in an attempt to build confidentiality, an envelope was provided for the respondent to insert and seal his response immediately upon completion.

This researcher observed that, after all responses were collected, the vast majority of envelopes were sealed. Each associate before leaving the establishment was to ask the owner if he could personally deliver the questionnaires to the employees. If the owner preferred to do this himself, sufficient questionnaires were to be left for his distribution. If any employees were absent on the day of contact, the surveyor was instructed to leave a packet and make arrangements for its pickup. At least three calls were made to secure the questionnaires not ready when the initial pickup visit was made. At the conclusion of the meeting with the associates, names of businesses to be contacted were



equally distributed based on geographic proximity.

The research data were gathered in March-April, 1977. Two hundred and thirty-one firms were contacted. Of those contacted, 86 did not meet the requirement of having two employees who worked 30 hours per week, 27 were out-of-business or had moved, and 16 were unwilling to participate (usually stating they were too busy). This left 102 firms who participated in this research sample.

### Data Analysis

Analysis of data will follow procedure as defined by Dubin (1956, p. 134) and Dubin and Champoux (1973, pp. 317-318) and Smith (1969, pp. 79-83). The Central Life Interest results will then be analyzed in comparison to Dubin's original study of industrial workers. The Job Description Index results will be analyzed in comparison to Smith's normative data developed from a study in 21 industrial plants (see Appendix D). Our attention will now turn to scoring procedures to be followed in the initial phase of data analysis.

### Central Life Interest

The original CLI questionnaire, developed by Dubin, contained 40 questions. For his 1963 study of German industrial workers, the questionnaire was reduced to 32 questions. This study, as most of the studies since 1965, will use the balanced 32-item questionnaire. Scoring

procedure will be discussed in relation to the revised CLI. This 32-item questionnaire contained eight questions in each of the four subgroups, namely, informal experience, general experience, organizational experience, and technical aspects. The scoring for the sub-groups is as follows:

- 1) Respondent is scored job-oriented if
  - a) At least four responses were job-oriented, or;
  - b) At least six responses were a combination of job-oriented and no preference, and at least three of the six responses were job-oriented.
- 2) Respondent is scored non-job-oriented if he/she was not scored job-oriented by the above criteria. (Note: A blank response is to be scored as a no preference).

For the overall CLI score the criteria for the 32-item questionnaire is as follows:

- 1) Respondent is scored job-oriented if:
  - a) At least 16 responses are job-oriented, or;
  - b) At least 22 (70%) responses are a combination of job-oriented and no preference, with at least 13 (40%) of the 22 responses being job-oriented.
- 2) Respondent is scored non-job-oriented if he/she was not scored job-oriented by the above criteria.

In a study by Dubin and Champoux (1973), a modified scoring procedure was developed. A third category, no preference, was added to the previous scoring categories of job-oriented and non-job-oriented. The scoring procedure is as follows:

- 1) Respondent is scored job-oriented, if:
  - a) At least 16 responses are job-oriented, or;

- b) At least 22 (70%) responses are a combination of job-oriented and no preference, with at least 13 (40%) responses being job-oriented.
- 2) Respondent is scored non-job-oriented if:
  - a) At least 16 responses are non-job-oriented, or;
  - b) At least 22 responses are a combination of non-job-oriented and no preference, with at least 13 non-job-oriented.
- 3) Respondent is scored no preference if he/she does not fit criteria 1 or 2 above.

For purposes of comparison with Dubin's original study, this research will use the two category classification. For correlation analysis with job satisfaction data the three category criteria will be used.

#### Job Description Index

Scoring procedure for the JDI, as prescribed by Smith, et al., is done independently for each aspect measured (1969, pp. 79-83). The JDI contains 18 adjectives under work, supervision, and co-workers, while it has 9 adjectives under pay and promotion. The respondent places a "y" (yes), "n" (no), or "?" (cannot decide) in front of each adjective. Responses in the "satisfied" direction for the JDI can be found in Appendix B. Weighting for JDI scoring is presented in Table 4-5. For scoring purposes, a weight of "3" is assigned to "yes to a positive item" or "no to a negative item." A weight of "0" is assigned to "no to a positive item" or "yes to a negative item." A weight of "1" is assigned to a "?" (could not decide) item. The scores of the pay and

TABLE 4-5

TRADITIONAL AND REVISED WEIGHTS FOR  
DIRECT SCORING OF JDI ITEMS

Response	Traditional Weight	Revised Weight
Yes to a positive item	3	3
No to a negative item	3	3
? to any item	2	1
Yes to a negative item	1	0
No to a positive item	1	0

SOURCE: Patricia Smith, et al., op. cit.,  
1969, p. 79.

promotion subscales are doubled to bring those two scales to a maximum possible score of 54, the same as the other three subscales. When a respondent leaves a blank, it is to be scored as a "could not decide" (?) item. Smith, et al., provide a table of JDI scores under various assumptions. Those expected scores are presented in Table 4-6.

TABLE 4-6  
JDI EXPECTED SCORES UNDER VARIOUS ASSUMPTIONS

Scale	Maximum Score	Expected Scores under Assumption of				
		Indifference	Response Set		Balanced Attitude	Equated Point
			Yes	No		
Work	54	18	30	24	27	26
Pay	54	18	24	30	27	22
Promotions	54	18	30	24	27	20
Supervision	54	18	30	24	27	33
Co-Workers	54	18	24	30	27	32

SOURCE: Patricia Smith, et al., op.cit., 1969, p. 81. The maximum score for each subscale, as mentioned earlier, is 54. This would be derived from the "satisfied" response being given to every adjective. A "could not decide" response to every item would give a score of 18 for the given subscale. A totally dissatisfied score would be "0." A balanced attitude, that is a score that is at the mid-point of the range, is a score of 27. The equated neutral point was

arrived at by equating JDI scores to a "Faces" scale. The equating was done by a sample of 181 males responding to the traditional JDI approach (y, n, ?) and by using a Faces scale in place of the y, n, and ?. Using the "Faces" neutral picture, an equated neutral position was determined, i.e., 26 for work, 22 for pay, and so on. (The sum of the equated neutral points for the four subscales being columns used in this research is equal to 100). The response set columns show that for three of the subscales, ten "yes" and eight "no" responses are required for a totally satisfied response, while for the other two subscales eight "yes" and ten "no" responses are needed for the satisfied response.

#### Statistical Analysis

A part of the scientific method of inquiry is to objectively and publicly derive conclusions which can be replicated so as to verify those conclusions. A basic consideration is the establishing of statistical inquiry which is logically sound. Siegel (1956, p. 6) has given the following procedure related to organizing the statistical analysis in a research effort;

- 1) State the null hypothesis ( $H_0$ ).
- 2) Chose a statistical test...for testing  $H_0$ .
- 3) Specify a significance level ( $\alpha$ ) and a sample size (N).
- 4) Find (or assume) the sampling distribution of the statistical test under  $H_0$ .
- 5) On the basis of 2, 3, and 4 above, define the region of rejection.

- 6) Compute the value of the statistical step, using the data obtained from the sample.

After stating the null hypotheses (see Chapter I), choosing the appropriate statistical test is critical to valid outcome. The decision as to whether to use parametric or nonparametric statistics must be answered. Nonparametric statistics were chosen to be used in this research effort where (1) it was anticipated sample size in certain categories of data would not possess sufficient N to use parametric assumptions, (2) tests could be made of characteristics about the population by relating that the strength is more or less than another factor without having to say how much more or less, and (3) data which was classificatory (i.e., job-oriented, no preference, non-job-oriented) in nature could be handled by nonparametric approaches (Siegel, 1956, p. 33).

Siegel states that the criteria in choosing a statistical test are:

- 1) The power of the test, power being defined as the probability of rejecting  $H_0$  when it in fact is false (Power = 1 - probability of Type II error = 1 - B).
- 2) The applicability of the statistical model on which the test is based to the data of the research.
- 3) Power-efficiency, defined as the amount of increase in sample size which is necessary to make Test B as powerful as Test A.
- 4) The level of measurement achieved in the research (nominal, ordinal, interval, and ratio). (Siegel, 1956, Chapter 3).

With these criteria in mind, the Chi-square ( $\chi^2$ ) t-test, Goodman-Kruskal, analysis of variance, and point biserial

correlation were chosen.

The analysis of the respondent's CLI scores involved testing against the 50-50 hypothesis to see if the results were significantly job-oriented or non-job-oriented. Results were then compared to Dubin's findings by visual inspection.

JDI responses were tested against the 50-50 hypothesis to check for significant satisfaction or dissatisfaction. The t-test was used to test for significant difference of means between this research study and Smith's study.

Analysis of the interrelationship between central life interest and job satisfaction was done by use of the Goodman-Kruskal gamma coefficient. The use of this technique followed the precedent of Dubin (Dubin, Champoux, and Stampfl, 1973). Gamma is defined by Goodman and Kruskal (1954, p. 749) as follows:

$$\gamma = \frac{\pi_s - \pi_d}{1 - \pi_e}$$

They state that gamma is to be interpreted similar to a correlation coefficient (Goodman and Kruskal, 1954).

Job satisfaction responses as related to the demographic variables of sex, age, education, and job tenure were tested by use of analysis of variance. F-scores were developed to test the significance of the selected demographic factor and a specific JDI facet.

Chi-square technique was used to test CLI responses and the selected demographic variables. Significance of Chi-square values were examined to see if the demographic



variables provided predictors of job satisfaction.

Finally, each of the selected demographic variables were analyzed for an interrelationship between the CLI and JDI response. A point biserial correlation was used to test for significant difference from zero among the different categories in each demographic variable.

Choice of statistical technique followed precedent set by Dubin, Smith, Starcevich, and Goldman. Also, in the interest of providing future ease of replication and comparability, it was decided to use widely accepted statistical methods (Note: The Goodman and Kruskal coefficient would not fit this "widely accepted" criteria, but was used because of the preceding use by Dubin).

The issue of research methodology has been addressed in this chapter. Relevant information related to the sample, measurement instruments, data collection, data analysis, and statistical analysis have been discussed. Chapters V and VI will discuss the findings from this small business research effort and the conclusions that one might infer from these findings.

## CHAPTER V

### RESEARCH FINDINGS

#### Introduction

In this chapter the research findings as related to the small business employee population sampled will be discussed in the following sequence: central life interest, job satisfaction, interrelation of central life interest/job satisfaction, and central life interest/job satisfaction as related to selected demographic factors. The theoretical base for the research is grounded in the works of Dubin and Smith.<sup>12</sup> Expected results to the testable hypotheses proposed by this researcher have been previously stated in Chapter I.

The research findings were subjected to statistical analysis to determine whether the data validated the stated hypotheses. These results are also intended to assist in

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<sup>12</sup>The reader is referred to Chapters II and III for an extensive review of the work of Dubin and Smith. The methodology of these two researchers can be found in Chapter IV.

formulating hypotheses for use in future research. This researcher does not consider the population of this research effort diverse enough in geographic perspective to make generalizations about the small business population as a whole. This research is intended to provide the foundation for future research efforts within the small business community and additional application of the two highly used research instruments (JDI and CLI).

A significance level of moderation ( $\alpha = .05$ ) was used in testing hypotheses with the knowledge that reducing the risk of falsely rejecting a significant relationship (beta error) would contribute to the objective of this research, namely, providing hypotheses for future research. A more stringent significance (i.e.,  $\alpha = .01$ ) would reduce the chance of accepting as significant a relationship (alpha error) that in fact was due to chance occurrence, but this is not deemed to be a priority concern when viewing the basic research objective of this dissertation.

The research findings are presented below in groupings as initially discussed in Chapter I.

#### Findings Related to Dubin's Theory

The results of this research as related to Dubin's work can be found in Table 5-1. This table is based on Dubin's original scoring method; results based on Dubin's revised scoring method will be examined following the discussion based on his original procedures for scoring the

TABLE 5-1

CENTRAL LIFE INTEREST RESPONSES OF  
SMALL BUSINESS EMPLOYEES STUDIES,  
AND INDUSTRIAL WORKERS  
STUDIES BY DUBIN

Central Life Interest Value Orientation	Small Business Employees Studied				Dubin's Original Study with Industrial Workers (1956)			
	Job- oriented		Non-job- oriented		Job- oriented		Non-Job- oriented	
	No.	%	No.	%	No.	%	No.	%
Overall	50	11	390*	89	118	24	373	76
Informal	37	8	403*	92	44	9	447	91
General	45	10	395*	90	74	15	417	85
Organizational	231	53	209	47	300	61	191	39
Technical	84	19	356	81	309	63	182	37

N = 440

N = 491

Note: Asterisk (\*) indicates hypothesis related to that particular CLI value orientation was significant at the  $\alpha = .05$ .

CLI.<sup>13</sup> Statistics pertaining to the Dubin related hypothesis are shown in Table 5-2.

TABLE 5-2  
STATISTICS RELATED TO  
H<sub>1</sub> THROUGH H<sub>5</sub>

	Null Hypothesis	$\hat{P}$	Z	Significance
H <sub>1</sub>	$P \geq \frac{1}{2}$	.114	-16.19	$\alpha = .05$
H <sub>2</sub>	$P \geq \frac{1}{2}$	.084	-17.42	$\alpha = .05$
H <sub>3</sub>	$P \geq \frac{1}{2}$	.102	-16.67	$\alpha = .05$
H <sub>4</sub>	$P \leq \frac{1}{2}$	.525	1.05	NS
H <sub>5</sub>	$P \leq \frac{1}{2}$	.191	-12.94	NS

Notes: N = 440;  $\sigma^2 = .00057$ ; P denotes job-oriented; and NS = not significant

Examination of the following five hypotheses attempts to answer the research question, "Is the workplace a central life interest for small business employees?" The hypotheses follow very closely the hypotheses as originally tested by Dubin (1956, pp. 135-138).

H<sub>1</sub>: A significant proportion of employees surveyed will be classified as non-job-oriented when central life interest is measured with the CLI questionnaire.

Among the small business employees sampled, 89% were non-job-oriented. The hypothesis was significant at  $\alpha = .05$  level. This result concurred with Dubin's original finding, although greater in magnitude than the 76% Dubin found among

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<sup>13</sup>For an explanation of Dubin's original and revised scoring procedure refer to Chapter IV.

industrial workers (Dubin, 1956). Other research with strong non-job-orientation includes Ima (1962) - 86%, Kremer (1962) - 76%, Nelson (1962) - 76%, Latta (1968) - 88%, Muhammed (1973) - 77%, and Dubin and Porter (1974) - 84%.

H<sub>2</sub>: A significant proportion of the employees surveyed will be non-job-oriented with respect specifically to informal group experiences, when measured on the relevant portion of the CLI questionnaire.<sup>14</sup>

Ninety-two percent of the small business employees responded to say that their informal group experiences were non-job-oriented. This result again agrees with Dubin's findings of 91%. The hypothesis was significant at the  $\alpha=.05$  level. Similar results from other research include Ima (1962) - 95%, Kremer (1962) - 98%, Nelson (1962) - 88%, Latta (1968) - 88%, Maurer (1968) - 95%, and Bowin (1970) - 89%.

H<sub>3</sub>: A significant proportion of employees surveyed will be non-job-oriented with respect to the general experience section of the CLI questionnaire.

This hypothesis was significant at the  $\alpha=.05$  with 90% of the responses being non-job-oriented. This closely parallels the findings of Nelson (1962) - 77%, and Latta (1968) - 82%.

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<sup>14</sup>Reviewing the previous discussion of Chapter II, Dubin used the informal group experience and general experience (to follow in H<sub>3</sub>) to test the proposition that "primary human relationships" take place only in situations where the social experience is valued by the individual (1956, p. 133). Dubin defines "primary human relations" as the "relationships that occur in groups where the interaction is face-to-face, continuous, intimate, and shared over a wide range of subjects."

- H<sub>4</sub>: A significant proportion of the employees surveyed will score job-oriented for their organizational experiences when measured on the organization section of the CLI questionnaire.

No significant relationship existed in the organizational experience section at the  $\alpha=.05$  level. There was significance at  $\alpha=.15$ . Divergence from Dubin occurred in this section as 53% of the small business employees surveyed expressed job-orientation with regard to their work compared to Dubin's 61% of industrial workers. The percentage of small business employee's organizational attachment is smaller than all the studies cited in Chapter II with the exception of Latta's (1968) which found 34% job-oriented in this section.

- H<sub>5</sub>: A significant proportion of the employees surveyed will be job-oriented with respect to the technological section of the CLI questionnaire.

Rejection of this hypothesis occurred as 81% of respondents were non-job-oriented as related to their technical experiences. Dubin had found 63% job-oriented in this section. The other research efforts previously cited had overall very high job-orientation in this section. The small business environment in this population apparently does not elicit or demand employees taking technical interest in their work.

As mentioned previously, the above hypotheses were tested by means of Dubin's original scoring procedure. At a later date, Dubin developed a revised scoring method adding a "no preference" category (Dubin and Champoux, 1974, pp. 317-318). The results of this research pertaining to the five hypotheses above and using the revised scoring procedure are

shown in Table 5-3.

TABLE 5-3

CENTRAL LIFE INTEREST VALUE ORIENTATION  
RESPONSE OF SMALL BUSINESS EMPLOYEES  
STUDIED, BASED ON DUBIN'S REVISED  
SCORING METHOD (1973)

Central Life Interest Value Orientation	Job- oriented		Non-job- oriented		No preference	
	No.	%	No.	%	No.	%
Overall	50	11	169	39	221	50
Informal	37	8	287	66	116	26
General	45	10	307	70	88	20
Organizational	231	53	122	28	87	19
Technical	84	19	57	13	299	68

N = 440

Statistics developed to re-test the hypotheses based on the revised scoring procedure are presented in Table 5-4. Using the revised scoring method,  $H_1$  is not significant at the  $\alpha=.05$  level, although the results were significant when using Dubin's original procedure. The reason for the change is the 221 "no preference" responses in the revised method. All of these responses were categorized as non-job-oriented by the original scoring method. Even though 39% of the small business employees sampled were non-job-oriented, as opposed to 11% being job-oriented, it would be incorrect to say that a significant proportion of small business employees are non-job-oriented. Approximately one-half fall in a fence-straddling position.

The next two hypotheses,  $H_2$  and  $H_3$ , were significant



TABLE 5-4

SUMMARY OF STATISTICS RELATED TO  
TESTING  $H_1$  THROUGH  $H_5$ , USING  
REVISED SCORING METHOD

	Null hypothesis	$\hat{P}$	Z	Significance
$H_1$	$P \leq \frac{1}{2}$	.384*	-4.86	NS
$H_2$	$P \leq \frac{1}{2}$	.652*	6.37.	$\alpha = .05$
$H_3$	$P \leq \frac{1}{2}$	.698*	8.29	$\alpha = .05$
$H_4$	$P \leq \frac{1}{2}$	.525**	1.05	NS
$H_5$	$P \leq \frac{1}{2}$	.191**	-12.94	NS

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Notes:  $N = 440$ ;  $\sigma^2 = .00057$ ; \* denotes P representing non-job-oriented; \*\* denotes P representing job-oriented; NS = not significant

at  $\alpha = .05$  under the original scoring method and are also significant under the revised method. This reinforces the findings that the small business employees of this population looked outside the work environment for their "primary social relationships."

The final two hypotheses of this section,  $H_4$  and  $H_5$ , have identical statistics for the original and revised methods, as the job-oriented category is the same under both scoring procedures.

In summary, small business employees of this research effort were primarily "no preference" in overall CLI (50%) with 39% displaying a non-job-orientation. The respondents look off-the-job for "primary social relationships" as measured by the informal and general experience sections. Finally, the majority of respondents look to their work organization with job-orientation (53% of those sampled) although this is not statistically significant. A large amount of the respondents (68%) stated "no preference" in relation to where their technical experience interests are found.

#### Findings Related to Smith's JDI

Results of the small business employees' responses to specific job concepts are reported in the following paragraphs. The four job facets of work, pay, promotion, and co-worker were measured with the use of Smith's JDI.

Table 5-5 summarizes the findings related to hypotheses 6-9 that deal with job satisfaction. A summary of the statistics related to the testing of hypotheses 6-9 is shown in Table 5-6. The reader should note that P denotes satisfaction in the work and co-worker hypotheses, while P denotes dissatisfaction in the pay and promotion hypotheses. Discussion follows of the four hypotheses which attempt to help answer the research question, "What is the state of job satisfaction among small business employees with respect to work, pay, promotion, and co-workers.

H<sub>6</sub>: A significant proportion of small business employees surveyed will show satisfaction as related to the work section of the JDI questionnaire.

This hypothesis was accepted at the  $\alpha=.05$  level.

Seventy-eight percent of the employees surveyed expressed satisfaction with work. The mean raw score for males was 32.69 which compared to a 36.57 score which Smith arrived at while norming the JDI (Smith, et al., 1969, p. 80). In this research the mean raw score for females was 34.16 which compared to a 35.74 score in the Smith study.

Statistics for t-test significance of difference between means of this research study and Smith's study are shown in Table 5-7 and Table 5-8. There was a significant difference in means for both males and females in the work section. In both cases the small business employee means fell below those of the Smith study. Although small business employees displayed satisfaction in the work section, they

TABLE 5-5  
RESULTS OF STUDY OF SMALL BUSINESS  
EMPLOYEES JOB SATISFACTION,  
BY CATEGORY OF JDI

JDI Category	Satisfied		Dissatisfied	
	No.	%	No.	%
Work	342	78	98	22
Pay	252	57	188	43
Promotion	178	40	262	60
Co-workers	323	73	117	27
Composite	300	68	140	32
N = 440				

Note: The point of division between satisfied and dissatisfied was the "equated neutral point" as determined by Smith. The raw scores for the equated neutral points are as follows: work = 26, pay = 22, promotion = 20, co-workers = 32, and composite = 100 (Smith, et al., 1969, p. 81).

TABLE 5-6  
SUMMARY OF STATISTICS RELATED  
TO TESTING  $H_6$  THROUGH  $H_9$

JDI Category	Null Hypothesis	$\hat{P}$	Z	Significance
Work	$P \leq \frac{1}{2}$	.777*	11.60	$\alpha = .05$
Pay	$P \leq \frac{1}{2}$	.427**	-3.27	NS
Promotion	$P \leq \frac{1}{2}$	.595**	3.98	$\alpha = .05$
Co-workers	$P \leq \frac{1}{2}$	.734*	9.80	$\alpha = .05$

Notes:  $N = 440$ ;  $\sigma^2 = .00057$ ; NS = not significant;  
\* denotes P as satisfaction; \*\* denotes P as dissatisfaction

TABLE 5-7  
SUMMARY OF JDI STATISTICS FOR MALES  
IN SMALL BUSINESS RESEARCH AND  
SMITH JDI RESEARCH

JDI Category	Small Business Employees			Smith JDI Research			t	Significant difference between means $\alpha = .05$
	N	$\bar{X}_1$	$\sigma_1$	N	$\bar{X}_2$	$\sigma_2$		
	Raw Scores			Raw Scores				
Work	146	32.69	10.69	1971	36.57	10.54	-4.24	yes
Pay	146	29.06	14.32	1966	29.90	14.53	- .68	no
Promotion	146	24.48	17.36	1945	22.06	15.77	1.07	no
Co-worker	146	39.14	13.19	1928	43.49	10.02	-3.497	yes

TABLE 5-8

SUMMARY OF JDI STATISTICS FOR FEMALES  
IN SMALL BUSINESS RESEARCH  
AND SMITH JDI RESEARCH

JDI Category	Small Business Employees			Smith JDI Research			Significance difference between means $\alpha = .05$	
	N	$\bar{X}_1$	$\sigma_1$	N	$\bar{X}_2$	$\sigma_2$		
	Raw Scores			Raw Scores				
Work	280	34.16	9.99	638	35.74	9.88	-3.10	yes
Pay	280	23.54	14.76	635	27.90	13.65	-4.07	yes
Promotion	280	19.56	15.36	634	17.77	13.38	1.59	no
Co-worker	280	39.98	12.91	636	42.09	10.51	-2.74	yes

apparently are not as satisfied as the cross section of population in the Smith study.<sup>15</sup>

H<sub>7</sub>: A significant proportion of small business employees surveyed will show dissatisfaction related to the pay section of the JDI questionnaire.

Over one-half (57%) of the respondents expressed satisfaction with pay. The hypothesis was rejected. The mean male raw score of this sample for the pay section was 29.06 as compared to 29.90 in the Smith study. The female mean raw score was 23.54 for this research as compared in the Smith study of 27.90. There was no significant difference between means for males in this research as compared to Smith's study, however, there was a significant difference in female mean scores (see Tables 5-7 and 5-8). This result leaves open the possibility that females in the small business population of this research study experience greater discrimination in pay than in the larger organizations of the Smith study. However, many other possible variables preclude making any definitive explanation for the greater dissatisfaction among small business females.

H<sub>8</sub>: A significant proportion of small business employees surveyed will show dissatisfaction related to the promotion section of the JDI questionnaire.

Dissatisfaction with promotion was in fact very real among small business employees. This hypothesis was accepted

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<sup>15</sup>For the characteristics of the Smith study normative sample, see Chapter III, Table 3-5.



at the  $\alpha = .05$ . Six of every ten employees surveyed indicated dissatisfaction with promotion potential. The male mean raw score of this research was 24.48 as compared to 22.06 in the Smith study. The female mean raw score was 19.56 as compared to the Smith mean of 17.7.

No significant difference existed between the means of either males or females in this study and the Smith study (see Tables 5-7 and 5-8). As expected, dissatisfaction with promotion among small business employees seems unavoidable with the limited number of positions available in the small organization. However, interestingly enough, the mean scores for promotion among small business employees were not as low as the means for Smith's study done in larger firms. A possible explanation could be that persons who work for a small business acclimate themselves to the belief that other advantages of the small business are more important than gaining hierarchical status within a work organization.

H<sub>9</sub>: A significant proportion of small business employees surveyed will show satisfaction related to the co-worker section of the JDI questionnaire.

This hypothesis was accepted at the  $\alpha = .05$  significance level. Sixty-eight percent of the respondents stated satisfaction with their co-workers. The mean raw score of males in this research was 39.14 as compared to 43.49 in Smith's study. Female mean raw score for this research was 39.98 as compared to 42.09 in the study by Smith. As shown in Tables 5-7 and 5-8, there is significant difference in the means

for both males and females between this study and Smith's study. The means for this study are well above the equated neutral point, but not as strongly satisfied with co-workers as the Smith study. A possible explanation rests in small business organizations not having a sufficient number of co-workers to permit the matchups of personalities that can occur where there are larger numbers in the larger organization. Satisfaction with co-workers, nonetheless, seems to be a potentially important facet in the small business employee job attitude.

In summary, small business employees were significantly satisfied with work and co-workers and significantly dissatisfied with promotion. Dissatisfaction with pay was not significant. Significant difference in mean scores between this research and Smith's study occurred in work and co-workers for both males and females. Significant difference also occurred in the means of female pay between the two studies.

Attention now is turned to the interrelationship between job satisfaction and central life interest.<sup>16</sup>

Findings Related to Interrelationship  
Between Central Life Interest  
And Job Satisfaction

Dubin's central life interest theory questioned the

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<sup>16</sup>Precedents for this relationship have been discussed in Chapter III.

Western culture assumption of the centrality of interest in work. Smith's job satisfaction index attempts to segment conceptually the major variable components of one's satisfaction with work. The conceptual question of importance in this section hinges on the interrelation, if any, between employees being satisfied with their job and possessing a central interest in their work. The following hypothesis provides the basis for testing the relationship:

H<sub>10</sub>: A significant relationship exists between job-orientation and job satisfaction.

Dubin's scoring procedure did not provide for a numerical score, therefore, the use of point-by-point correlation was precluded. A bivariate method developed by Goodman and Kruskal was selected which provides a measure of the degree of association for populations which are cross-classified (Goodman and Kruskal, 1954, pp. 732-764).<sup>17</sup>

Statistical procedure for the determination of gamma, and thus a measure of association between job-orientation and job satisfaction, is given in Table 5-9. To test the hypothesis, a gamma value of .2303 was derived, which was significant at the  $\alpha = .05$  level. Dubin, citing Goodman and Kruskal, states, "the gamma coefficient...is a measure of the strength of the relationship between variables that is similar conceptually to a correlation coefficient. The size

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<sup>17</sup>For a precedent in the use of this bivariate analysis method see the work of Dubin, Champoux, and Stampfl in Chapter III.

TABLE 5-9

MEASURE OF ASSOCIATION BETWEEN  
JOB-ORIENTATION AND  
JOB SATISFACTION

JDI Responses	CLI Responses			Totals
	JO	NP	NJO	
Satisfied	43	150	107	300
Dissatisfied	7	71	62	140
Totals	50	221	169	440

$$\pi_s = \frac{43}{440} = .1552$$

$$\pi_d = \frac{107}{1111} = .0971$$

$$Y = \frac{\pi_s - \pi_d}{1 - \pi_e} = \frac{.1552 - .0971}{.2523} = .2303^*$$

\*Significant at  $\alpha = .05$

and sign of a gamma is interpreted in approximately the same way as a correlation coefficient" (Dubin, Champoux, and Stampfl, 1973, p. 9). The respondents in this small business population displayed a significant correlation between job-orientation and job satisfaction.

The remaining hypotheses of this chapter are related to the testing of selected demographic factors and their relationship, if any, to central life interest and job satisfaction. The male/female variable will be viewed in the next section.

#### Findings Related to the Sex Variable

The first selected demographic factor for analysis in this research is that of sex. Hypotheses 11-13 are developed to test for significant difference based on sex in job satisfaction, central life interest, and the interrelationship between central life interest/job satisfaction.

#### Sex and Job Satisfaction

The relationship between sex and job satisfaction scores was examined in relation to the following hypothesis:

H<sub>11</sub>: Males will score significantly higher than females in job satisfaction when measured by the JDI.

Analysis of variance was used to test the difference in means between sexes for each of the four JDI sections: work itself, pay, promotion, and co-worker. The F-scores for each of the JDI sections are shown in the Table

5-10.<sup>18</sup> There was significant difference in means between males and females in the pay and promotion section. Both sexes were dissatisfied, but the females were more dissatisfied in both instances. In the work and co-worker categories, no significant difference existed. The females had slightly higher means in both cases. The composite was barely significant and should be viewed with light regard.

#### Sex and Central Life Interest

The following hypothesis was developed to test the sex variable and central life interest results:

H<sub>12</sub>: A significantly higher percentage of males, as compared to females, will be job-oriented when measured by the CLI.<sup>19</sup>

The hypothesis is rejected in using a Chi-square test and the  $\alpha = .05$  significance level. The  $\chi^2$  value is 3.69 with two degrees of freedom.<sup>20</sup> The hypothesis is accepted, however, at the  $\alpha = .25$  level. The sex variable of this research population has not provided an indicator of job-orientation or non-job-orientation.

#### Sex and the Interrelationship of Central Life Interest/Job Satisfaction

The next hypothesis (H<sub>13</sub>), was formulated to test whether the sex of a respondent provided an indicator of

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<sup>18</sup>Statistical calculations are in Appendix G.

<sup>19</sup>The revised scoring method of Dubin will be used in CLI data for the sex variable analysis, as well as all other demographic variable analysis.

<sup>20</sup>The Chi-square calculations are shown in Appendix F.

TABLE 5-10  
ANALYSIS OF VARIANCE (F-SCORE)  
BETWEEN MALE/FEMALE FOR  
JDI CATEGORIES

JDI Category	F-score
Work	1.97
Pay	13.03*
Promotion	8.97*
Co-worker	.40
Composite	4.00*

Notes:  $F(1, \infty) = 3.84$ ; \*  
significant at  $\alpha = .05$

interrelationship between job-orientation/job satisfaction.

The hypothesis is:

- H<sub>13</sub>: Males will show significant difference from females in the interrelationship between central life interest and job satisfaction, namely, greater correlation between job-orientation/satisfaction.

As mentioned in connection with H<sub>10</sub>, Dubin's scoring procedure did not provide a numerical score, or allow for one to be developed, and therefore, point-by-point correlation was not possible with the interrelationship data of the CLI and JDI. In an attempt to capture the statistical strength of using the JDI numerical scores, a point biserial correlation was used in conjunction with this hypothesis (H<sub>13</sub>). The point biserial necessitated the use of JDI raw scores and the CLI categories of job-oriented and non-job-oriented. No preference CLI respondents were excluded from this analysis.

The correlation for males was significantly different from zero, with  $r = .4040$ . The male sample included job-oriented of 23 and non-job-oriented of 55. For females,  $r = .0827$  which was not significantly different from zero. The female sample included 26 job-oriented and 111 non-job-oriented. The higher correlation for males between job-orientation/satisfaction suggests that males more strongly tie job satisfaction and central life interest than do their female counterparts.

The second demographic variable to be analyzed is age, and those findings are discussed in the next section.



### Findings Related to the Age Variable

Age has been a demographic variable of long-standing interest in personnel studies.<sup>21</sup> Hypotheses 14-16 test the relationship of age and job satisfaction, job orientation, and the interrelationship of job-orientation/satisfaction in this research project.

#### Age and Job Satisfaction

The following hypothesis is given to test the significance of age and job satisfaction in this research project:

- H<sub>14</sub>: Younger workers will score significantly higher than older workers in job satisfaction when measured by the JDI.

Using age as a distinguishing criterion, analysis of variance was used to test for significant difference. Table 5-11 gives the F-score for each JDI category. The only significant category was work itself which was significant at the  $\alpha = .05$  level. Younger workers were less satisfied than older workers. The below 25 age group had a mean score of 31.02 in the work section. The means, for work itself, as the age categories proceed upward were 33.66, 34.26, 36.39, and 36.73. Thus, satisfaction from work itself, in, this population, became greater with increased age.

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<sup>21</sup>Research related to age can be found in Chapter III.

TABLE 5-11

ANALYSIS OF VARIANCE (F-SCORE)  
 BETWEEN AGE GROUPS FOR  
 JDI CATEGORIES

JDI Category	F-Score
Work	5.092*
Pay	.45
Promotion	.32
Co-worker	.05
Composite	.23

Notes:  $F(4, \infty) = 2.37$ ; \*  
 significant at  $\alpha = .05$

### Age and Central Life Interest

The following hypothesis was developed to test the age and central life interest relationship:

- H<sub>15</sub>: A significantly higher percentage of younger workers, as compared to older workers, will be job-oriented when measured by the CLI.

This hypothesis was not significant at the  $\alpha = .05$  level. A Chi-square test was used,  $\chi^2 = 4.78$  with  $df = 8$ .<sup>22</sup> Age in this population was not a predictor of job-orientation or non-job-orientation.

### Age and the Interrelationship of Central Life Interest and Job Satisfaction

The following hypothesis is given to test the relationship of age and job-orientation/satisfaction:

- H<sub>16</sub>: Younger workers will show significant difference from older workers in the interrelationship between central life interest and job satisfaction, namely, greater correlation between job-orientation/satisfaction.

Table 5-12 shows correlations between JDI scores and CLI job-oriented/non-job-oriented respondents. Only the correlation for the 40-49 age group of  $r = .4244$  is significantly different from zero at the  $\alpha = .05$  level. cursory observation shows the correlations becoming stronger with age until the age 50-up category, where a drop occurs. The youngest age group provides the weakest correlation, whereas, the 40-49

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<sup>22</sup>The Chi-square calculations are shown in Appendix F.

TABLE 5-12

CORRELATIONS BY AGE CATEGORY BETWEEN  
JDI SCORE AND JOB-ORIENTED/  
NON-JOB-ORIENTED

Age Category	r	n <sub>1</sub>	n <sub>2</sub>
0-24	.1700	16	57
25-29	.1979	10	34
30-39	.2173	9	30
40-49	.4244*	6	25
50-up	.2799	8	19

Notes: n<sub>1</sub> = job-oriented; n<sub>2</sub> = non-job-oriented; and \* significantly different from zero at  $\alpha = .05$ .

age group provides the strongest. The 40-49 age respondents are peaking in their work careers which may account for a strong relationship between the locus of employees' central interests and their satisfaction with work.

The next demographic variable to be examined is education.

### Findings Related to Education Variables

Hypotheses 17-19 are formulated to test for significance in the relationship between amount of education and job-satisfaction, job-orientation, and the interrelationship of job-orientation/satisfaction among the small business employees of this research.<sup>23</sup>

#### Education and Job Satisfaction

To test the relationship of the education variable with job satisfaction, the following hypothesis is stated:

- H<sub>17</sub>: Workers with more formal education will score significantly higher than workers with less formal education in job satisfaction when measured by the JDI.

Significant differences in means existed for all four JDI categories in connection with the education variable. Table 5-13 shows the F-scores for each JDI category.<sup>24</sup>

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<sup>23</sup>Research related to education can be found in Chapter III.

<sup>24</sup>Calculations and supporting data can be found in Appendix G.

TABLE 5-13  
ANALYSIS OF VARIANCE (F-SCORE)  
BETWEEN EDUCATION LEVELS  
FOR JDI CATEGORIES

JDI Category	F-score
Work	7.33*
Pay	6.81*
Promotion	2.85*
Co-worker	7.50*
Composite	9.11*

Notes:  $F(3, \infty) = 2.60$ ; \*  
significant at  $\alpha = .05$

In the work and co-workers categories the employees show the strongest significant difference of means, while pay is next and promotion is a very weak, but still significant correlation. The means for work itself displayed the most definite pattern in support of this hypothesis, in that the 0-10 year education level group had  $\bar{X}_1=26.77$ , the 11-12 year level had  $\bar{X}_2=33.12$ , the 13-14 year level had  $\bar{X}_3=35.29$ , and the 15-up level had  $\bar{X}_4=34.95$ . The mean satisfaction was progressively upward through the first three levels and then tapered slightly in the most educated. The pay and promotion means followed a similar pattern. Co-worker section displayed an up and down movement with the mean satisfaction scores

being 30.23, 40.08, 39.52, and 42.08 respectively.

Education level was a significant predictor of satisfaction among the small business population sampled with the generalized result of greater satisfaction with increased formal education in all JDI categories measured.

#### Education and Central Life Interest

Education and job-orientation was tested with the following hypothesis:

- H<sub>18</sub>: A significantly higher percentage of workers with more formal education, as compared to workers with less, will be job-oriented when measured by the CLI.

Once again, no significant relationship existed between CLI response and a demographic variable, in this case, amount of education. The Chi-square value of 4.52 was not significant at the  $\alpha = .05$  level.<sup>25</sup> Education for the small business employees of this research population does not provide a predictor for job-orientation or non-job-orientation.

#### Education and the Interrelationship of Central Life Interest and Job Satisfaction

The following hypothesis is given to test the relationship of education and job-orientation/satisfaction:

- H<sub>19</sub>: Workers with more formal education will show significant difference from workers with less formal education in the interrelationship between central life interest and job satisfaction, namely, greater correlation between job-orientation/satisfaction.

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<sup>25</sup>The Chi-square calculations are shown in Appendix F.

The correlations for the various levels of education among respondents are shown in Table 5-14. A very sporadic pattern of correlations exists between the education levels as can be seen in the table. There is a strong negative correlation in the 0-10 grade category which jumps to a strong positive correlation in the grade 11-12 respondents. Both are significantly different from zero at the  $\alpha = .05$  level. In the 13-14 grade category, the correlation becomes very weak and is not significantly different from zero. The grade 15-up category then bounces back up to a stronger correlation which is significantly different from zero. The two categories, containing the predominately high school graduates and the college graduate (11-12 and 15-up), displayed significant correlation between satisfaction and job-orientation.

#### Findings Related to Job Tenure Variable

The final selected demographic variable observed is that of job tenure. Hypotheses 20-22 are stated to test the relationship of job tenure to job satisfaction, job-orientation, and the interrelationship between job-orientation/  
<sup>26</sup>satisfaction among this population.

#### Job Tenure and Job Satisfaction

The following hypothesis was developed to test for a

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<sup>26</sup>Research related to job tenure can be found in Chapter III.



TABLE 5-14

CORRELATIONS BY EDUCATION LEVEL BETWEEN  
JDI SCORE AND JOB-ORIENTED/  
NON-JOB-ORIENTED

Education Level (Grade)	r	n <sub>1</sub>	n <sub>2</sub>
0-10	-.4348*	4	15
11-12	.4702*	19	65
13-14	.0396	15	58
15-up	.3374*	12	30

Notes: n<sub>1</sub> are job-oriented; n<sub>2</sub>  
are non-job-oriented; and \* significantly  
different from zero at  $\alpha = .05$

significant relationship between job tenure and job satisfaction:

H<sub>20</sub>: Workers with shorter job tenure will score significantly higher than workers with longer job tenure in job satisfaction when measured by the JDI.

Only in the work itself category did a significant difference exist between the tenure groups. Table 5-15 shows F-scores.<sup>27</sup> The means for the three tenure groups are as follows: 0-3 years tenure had mean of 33.32, 4-9 year tenure group had a mean of 33.37, and 10-up tenure group had a mean of 37.95. The 0-3 and 4-9 groups had almost identical means while the 10-up group provided the significant jump upwards. Based on work itself, the hypothesis would be rejected, with longer tenured workers showing greater satisfaction. It should be noted, however, that this did not occur until after 10 years. Another caution should be considered: the population of this research was heavily skewed to the low tenure end leaving a much smaller sample in the longer tenure category.

#### Job Tenure and Central Life Interest

In testing for a significant relationship between job tenure and job-orientation, the following hypothesis is given:

H<sub>21</sub>: A significantly higher percentage of workers with shorter job tenure, as compared to longer tenure, will be job-oriented when measured by the CLI.

This hypothesis was not significant at the  $\alpha = .05$  level. The Chi-square value was 4.42 with 4 degrees of

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<sup>27</sup>Supporting data can be found in Appendix G.

TABLE 5-15  
ANALYSIS OF VARIANCE (F-SCORE) BETWEEN  
JOB TENURE GROUPS BY JDI CATEGORY

JDI Category	F-Score
Work	3.60*
Pay	2.63
Promotion	1.81
Co-worker	.08
Composite	.34

Notes:  $F(2, \infty) = 3.00$ ; \*  
significant at  $\alpha = .05$

freedom.<sup>28</sup> With the non-significance of job tenure as a predictor of job-orientation, all four selected demographic variables failed to give an indication of central life interest among the small business research population.

### Job Tenure and the Interrelationship of Central Life Interest and Job Satisfaction

The interrelationship between job-orientation/satisfaction and the predictor variable, job tenure, is examined by the following hypothesis:

- H<sub>22</sub>: Workers with shorter job tenure will show significant difference from workers with longer job tenure in the interrelationship between central life interest and job satisfaction, namely, greater correlation between job orientation/satisfied and non-job-oriented/dissatisfied.

Examination of this hypothesis is related to the correlations found in Table 5-16. The correlation for those respondents with 0-3 years of tenure was .2154, which was significantly different from zero. Thus, some predictive ability is shown for those relatively new on the job and the correlation between job-orientation/satisfaction. The 4-9 year tenure group did not show significant differences from zero, and thus no predictive power. The sample size of the ten year and up category precluded valid results from this group.

At this point, the findings of this research project have been presented. A new set of data based on the widely

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<sup>28</sup>The Chi-square calculations are shown in Appendix F.

TABLE 5-16

CORRELATIONS BY JOB TENURE BETWEEN JDI SCORE  
AND JOB-ORIENTED/NON-JOB-ORIENTED

Job Tenure (Years)	r	n <sub>1</sub>	n <sub>2</sub>
0-3	.2154*	36	123
4-9	.1575	7	33
10-up	.4292	7	11

Notes: n<sub>1</sub> are job-oriented; n<sub>2</sub> are non-job-oriented; and \* significantly different from zero at  $\alpha = .05$

used CLI and JDI instruments has been generated relating to the small business community. The next chapter is now presented to state conclusions to the knowledge gained in this research effort.

## CHAPTER VI

### SUMMARY AND CONCLUSIONS

This research was undertaken in an attempt to increase knowledge and understanding of the small business employee. The conclusions to be discussed in this chapter are not intended to be construed as generalizations for all populations, but rather reflections of the population sampled. Much additional research and replication need be undertaken before the sociological and psychological construct of the small business employee can be generalized. The conclusions of this research are discussed in relation to the questions posed in Chapter I.

#### Central Life Interest

1. Is the workplace the central life interest for the small business employees?

In response to the CLI questionnaire, small business employees were heavily non-job-oriented (89%) based on Dubin's original scoring procedure; and more non-job-oriented (39%) than job-oriented (11%) based on the revised

scoring method. Irrespective of the scoring method, only 11% stated that their work was their central life interest. Thus, it seems plausible for small business owners to approach personnel policies related with the assumption that most likely the employee is not a job-oriented person and, consequently, pay, motivational approaches, performance incentives, and so on, should be presented in a way so as to consider both job and non-job interests of the person.

The four sub-sections of the CLI showed the employees to be heavily non-job-oriented in informal and general experience, slightly job-oriented in organizational experience, primarily "no preference" in technical. Non-job-orientation in informal and general experience suggests that the small business employees look off the job for their "primary human relationships." This paralleled the findings of Dubin and most other researchers. The implication here for owners would seem to be that in dealing with human relations problems of their employees, the problems stem primarily from on-the-job encounters rather than off-job since small business employees do not carry business peer relationship to off the job socializing. The owner cannot in all likelihood, depend on off-the-job camaraderie of his employees to provide on-the-job esprit de corps. In response to the organizational experience, 53% displayed job-orientation, 28% non-job-orientation, and 19% "no preference." This is not as strong a job-orientation as Dubin found and most other researchers.



The small business organization apparently does not strongly attract organizational orientation, although over one-half did express their small business organization as a prime influence. Almost 7 of 10 respondents had "no preference" responses in the technical experience section of the CLI. This might suggest a lack of technical challenge in the work requirements of employees in the small business organizations. Owners might be well served in increasing the employees' involvement by increasing the technical demands placed on the employees where possible. Dubin found 63% job-oriented in the technical area. Most other research efforts have found heavier technical job-orientation than was found in the small business organization.

### Job Satisfaction

2. In a "need deprivation" sense what is the state of job satisfaction among small business employees with respect to work itself, pay, promotion, and co-workers?

Using the Smith JDI, the employees were significantly satisfied with work itself and co-workers, yet they were significantly dissatisfied with promotion. The pay section did not show any significance either way. In comparing the mean raw scores of this research to mean scores Smith developed in the norming process, there was a significant difference between means in the work itself and co-workers sections, but no significant difference in the promotion section.

In the work itself section, small business employees were less satisfied than the respondents in Smith's study (done in larger organizations); however, the small business employees were well above the equated neutral point. The implication seems to be that small business employees are satisfied with the job they are doing, possibly due to the versatility and comprehensiveness that most positions in small organizations entail. Entrepreneurs should work diligently to exploit this positive attitude in the selection, training, and retraining of the small business employee.

Small business employee response to the co-worker section was satisfied, but less satisfied than in the Smith study. A possible explanation might rest in the fact that due to smaller numbers of employees, finding co-workers of like interests is more difficult. On the job relationships are more directly forged for the small business employee, because of small numbers, than for employees of larger organizations. However, the small business employees were much higher than the equated neutral point, and thus, owners should use the positive attitude of workers toward their peers as a viable option for improving organizational climate.

Responses to the promotion section displayed strong dissatisfaction, which was to be expected in the small organization where promotion opportunity is extremely limited. As somewhat of a paradox, the mean for small business employees was not as dissatisfied as Smith's mean from larger

organizations. Owners in small business must accept this inherent disadvantage of limited promotion opportunity and compensate for it in other ways.

The pay section did not show significant satisfaction or dissatisfaction and was not significantly different from Smith's mean for males, although it was for females. The average wage for employees sampled was \$2.81 per hour which might indicate why there was not extreme satisfaction with pay. However, in lieu of that average wage, it might speak well for other advantages of the small business organization which apparently have kept the employees from becoming extremely dissatisfied with pay.

#### Central Life Interest and Job Satisfaction Relationship

3. Is there a significant relationship between job satisfaction/job-orientation and job dissatisfaction/non-job-orientation?

Small business employees did show a significant relationship between job satisfaction and job-orientation as measured by the Goodman/Kruskal gamma coefficient. Dubin, Champoux, and Stampfl (1973) also found a similar association in previous research. The implication of this association rests in the fact that small business employees who are non-job-oriented or show no preference may have job satisfaction tempered by this orientation. Thus, if owners are to effectively deal in personnel relations, they must realize

the employee's non-job related interests are important in tempering job behavior. Any decision-making regarding personnel which assumes work as a central life interest, may experience negative job behavior complications.

### Sex

4. What importance, if any, does sex play in central life interest and job-satisfaction among small business employees?

Viewing the sex variable in relation to job satisfaction, the pay and promotion means were significantly different, while work itself and co-workers means were not. There was greater dissatisfaction on the part of females in both the pay and promotion sections. This might indicate a slower acceptance on the part of the small business owners to accelerate the pay and advancement opportunity for females, which is characteristic of current societal climate.

No significant difference in job or non-job-orientation existed between the sexes.

The interrelationship between job-orientation and job satisfaction was significantly different from zero for males, but not for females. Thus, the results would suggest approaching male personnel decisions as if job satisfaction, is, in fact, affected by the person's central life interest orientation. For females the relationship can be discounted.

Age

5. What importance, if any, does age play in central life interest and job satisfaction among small business employees?

Isolating the age variable in relation to job satisfaction, only the work itself category showed a significant relationship. Satisfaction with work increased with age. This would support the linear model, as does the work of Bernberg (1954), Hulin (1963), Hulin and Smith (1965), Gibson and Klein (1970), and Calitz (1974). If this is correct, owners need to work harder at retaining younger workers by actively displaying managerial interest in the satisfaction of the workers.

No significant differences existed between age groups as to job or non-job-orientation.

Correlations between job-orientation and job satisfaction increase in each age category up to the oldest category (50 years-up), where a slight drop occurs. Only in the 40-49 age category is there a significant difference from zero. A possible implication is that younger workers are still early enough in their careers that no set pattern of job-orientation directly affects job satisfaction; whereas, in the 40-49 age group, who are about as far as they will go in their careers, interests on the job signify satisfaction with the job and interest off the job is an appeasement for dissatisfaction at work. If this were in fact true,

managerial implications would rest in handling the non-job-orientation of a 25-year-old employee differently than that of a 45-year-old.

### Education

6. What importance, if any, does education play in central life interest and job satisfaction among small business employees?

When examining level of education and job satisfaction, all four categories of the JDI showed significant difference. However, the categories did not display any consistent pattern. The means for each education group in the work category rose with education level until the highest educated (15-up), at which time the mean dropped slightly. Generally, though, satisfaction for work itself increased with education. In the pay section, a similar pattern occurred. In the promotion section, there was a rise in means from 0-10 years group to 11-12 years group. However, from 11-12 years group to 13-14 years group the means dropped followed by continued decline in the 15-up group. The suggestion in regards to promotion is that the more education beyond high school, the more one becomes dissatisfied with promotion possibilities. The co-worker section was the most erratic relationship, showing no consistent pattern. More or less education is apparently not a good indicator of satisfaction with co-workers. To summarize the overall effect of education level and job satisfaction, small business employees

displayed a generally positive correlation except in the highest educated, where satisfaction dropped off slightly. The small business owner might make a generalized assumption that the increased education of their employees will aid in job satisfaction, but once they have a college graduate on their hands, special attention will need be paid, as there is a tendency for job satisfaction to drop.

Education level and job-orientation proved to have no significant relationship.

Education level as related to the interrelationship of job-orientation and job satisfaction was found to be significant for the 11-12 grade level, as well as, the 15-up level. The high school and college graduate, thus, are displaying a greater tendency than others to relate job-orientation with job satisfaction and non-job-orientation with job dissatisfaction. The fact that these respondents have terminated a formal educational program, and thus are not short of a goal or still in the process of attaining an educational goal, may be influencing the linkage they are displaying between job-orientation and satisfaction.

### Job Tenure

7. What importance, if any, does job tenure play in central life interest and job satisfaction among small business employees?

In viewing job tenure and job satisfaction, only the work itself category showed a significant relationship. The

means for the 0-3 year group and 4-9 year group were almost identical, while the 10-up year group displayed a large jump. Apparently, those employees who have stayed with their work organization at least 10 years grow in satisfaction (as measured by the work itself category). However, no significant distinguishment can be made in satisfaction in this work category for those who are relatively new and those who have been there a moderate period of time, say 4-9 years. Overall, tenure does not seem to provide good predictions of satisfaction levels.

Central life interest did not show any significant relationships to job tenure categories.

In viewing the interrelationship between job-orientation and job satisfaction with job tenure categories, only the 0-3 year tenure group showed significant difference from zero. The correlation in this age group might suggest the importance of attention to retention in the early years of employment. This group in displaying a higher degree of correlation between job-orientation/satisfaction, are saying that attracting their interest to their job may aid in job satisfaction, which could have an affect on their staying with the company, performance, and so on.

#### Recommendation for Further Research

This study was not intended to be an end in itself, but, rather, a contribution toward another end. Greater understanding of the small business employee, as well as,



increased knowledge of two widely used instruments were objectives. The humanness of this researcher precludes any belief that the design and results are above reproach. In view of this fact, generalizations of these data, and the identification of any long-range implications they may have, have been left for future research to proclaim. Recommendations for further research are as follows:

1. Replicate this study with a sample which is larger numerically and more widely dispersed geographically.

2. Extend the study to different classifications of small businesses, thus, providing more definitive analyses to particular small business organizations, e.g., retail, service, manufacturing, and so on.

3. Extend the demographic variables explored to add other variables of importance to the small business organization, e.g., income, type of business, family status, and so on.

4. Attempt to develop a valid numerical rating for Dubin's CLI in order to allow point-by-point correlation with Smith's JDI and other evaluative devices.

5. Use a multivariate statistical technique to further explore the job satisfaction and central life interest relationship.

The preceding pages of this research provide but one small step by man in an attempt to add to the large step that mankind is taking in the arena of knowledge. This

researcher, at this particular time in history, succumbs to exhaustion, and therefore, graciously leaves expansion of this research to future aspiring candidates!

## APPENDIX A

### Central Life Interest Questionnaire

#### Instructions

The instructions asked the subject to check one of the three responses that best approximated his or her view, even though none of the statements exactly fit his or her view.

The response shown beside each item indicates whether that statement represents a job-oriented (J), non-job-oriented (N), or no preference (I) response.

The letter in the left margin indicates the sub-sector of the CLI to which that question is a part. The sub-sectors include: informal (I), general (G), organizational (O), and technical (T).

- T 1. I enjoy reading technical articles and books to learn more about  
    I only something very special and important  
    N my hobby or other interests  
    J my job
- T 2. Interruptions bother me most  
    J when working at the office  
    N when working at home  
    I hardly ever
- G 3. I do my best work  
    J when I am at the office  
    I when I'm not bothered by people  
    N when I work around the house or on a community project
- O 4. I would rather accept a committee chairmanship  
    I anytime, any place  
    J of a company operating or advisory committee  
    N in an organization or club of which I am a member

- T 5. When I am doing some work, I usually try not to waste time  
I I seldom worry about wasting time  
N on a project at home or in the community  
J on my job
- G 6. I believe that  
N helping my fellow man is more important than anything else  
J my career is more important than anything else  
I most things are about equally important
- I 7. In my free time at work, I would rather  
I talk about whatever comes up  
J talk about things I am working on in the company  
N talk about things that are going on in sports or politics
- G 8. I am most interested in  
J things about my job  
N things I usually do around the house or in the community  
I just about everything I do
- T 9. I most enjoy keeping  
N my things around the house in good shape  
I my mind off such things  
J my desk and reports in good shape at the office
- I 10. I prefer to have as friends  
J people I get to know in my work  
N people who share my leisure interests  
I different people according to what they're like
- T 11. Moving ahead on my job  
N is not so important to me that I would give up time to make contacts and get information about my work  
I is so important to me that I'm willing to spend extra time to make contacts and pick up information about my work  
I is not particularly important to me
- I 12. If I received a promotion that meant moving to another city  
I my friendships wouldn't make any difference in my moving  
J I would most dislike leaving my friends at the office  
N I would most dislike leaving my other friends

713. The people I can count on most when I need help are  
J the friends I have at work  
N the friends I have in the community  
I almost any of my friends
614. When I am worried, it is usually about  
J how well I am doing in my career  
I just little things  
N things that happen at home
715. When I am not with them, the people I miss most are  
I just people in general  
N my friends around town  
J my friends with whom I work
016. I am happier if I am praised for doing a good job of  
J something at work  
N something in an organization I belong to  
I anything, it doesn't matter very much what
017. If I were sick and had to stay home, I would most hate  
J missing a day's work  
I missing almost anything I usually do  
N missing a meeting of an organization I belong to
618. The most important things I do are concerned with  
N relaxation  
J my career  
I different things at different times
619. I hope my children can  
J work in the same kind of occupation as mine  
I work in any occupation, just so they enjoy their work  
N work in a different kind of occupation from mine
720. In my spare time  
I I just prefer to relax  
J I often think of better ways of doing my work  
N I have a thousand things that need doing
021. I sometimes hope that  
J I'll get special recognition for doing a good job at work  
N I'll get to be a more important member of my club, church or lodge  
I such things will not bother me

122. If I needed cash within a few hours for an emergency on a Sunday and had to borrow it, I would probably turn to  
N people I know in the community  
J people I know in the company  
I anyone who would lend it to me
023. It is easier for me to take a chewing out  
I from anyone - I listen and forget it  
J from a policeman  
N from my boss
024. I would donate more money in the case of a collection  
I if the solicitor was a friend of mine  
N for a charitable organization  
J for a wedding present or retirement gift for a colleague at the office
- T25. If I have to work with someone else who is a slow worker  
I I am annoyed regardless of where we are working  
J I am most annoyed on a job at the office  
N I am most annoyed on a volunteer community project
- T26. In getting a job done, it is most important for me to have adequate freedom to plan it  
J at the office  
N on a community project  
I anytime, any place
- I27. I would rather take my vacation with  
J some friends from work  
N my family  
I by myself
- I28. I most like  
N talking with friends about things that are happening  
I talking about whatever my friends want to talk about  
J talking with my friends about my work and what is happening in the company
- G29. In order to get ahead in the world  
I you have to have a lot of luck  
J you have to be well liked where you work  
N you have to be well liked and known in the community
030. If a company project I knew about but was not involved in gave everybody trouble, and I heard another company had solved this problem  
N I have too many problems of my own to get involved  
J I would tell my boss or colleagues about it  
I I don't worry about such things

- G31. I think that if I were suddenly to get a much better job  
N probably my life would not change much except that  
       I'd live a little better  
J probably my like would change and be better in many  
       ways  
I I wouldn't know what would happen to my life
032. I would much rather be a leader  
I in any organization, just so it's a good one  
N in my club or church  
J in my work

## General Information

1. Sex:     \_\_\_ Male                   \_\_\_ Female
2. Age:     \_\_\_ Up to 24           \_\_\_ 40 - 44  
           \_\_\_ 25 - 29           \_\_\_ 45 - 49  
           \_\_\_ 30 - 34           \_\_\_ 50 - 54  
           \_\_\_ 35 - 39           \_\_\_ 55 - Up
3. Salary: \$\_\_\_ per hour or \$\_\_\_ per month  
           Other: \_\_\_\_\_
4. Type of business of your employer:  
       \_\_\_\_\_
5. How long have you been employed by your present employer?  
       \_\_\_\_\_
6. How many additional years experience have you had in  
    similar type work with other employers?  
       \_\_\_\_\_
7. Please circle the highest grade of formal education  
    attained  
    Grade level: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Grad  
                   Other: \_\_\_\_\_

8. Would you describe your athletic participation during the adolescent years as:

☐ Not involved at all in organized athletics.

☐ Moderately involved in organized athletics.

☐ Heavily involved in organized athletics.

What sport(s)? \_\_\_\_\_



## APPENDIX B

### Job Description Index

#### Instructions

The instructions for each scale asked the subject to put "y" beside an item if the item described the particular aspect of his job (e.g., work, pay, etc.), "N" if the item did not describe that aspect, or "?" if he could not decide.

The response shown beside each item is the one scored in the "satisfied" direction for each scale.

<u>Work</u>		<u>People</u>	
<u>y</u>	Fascinating	<u>y</u>	Stimulating
<u>y</u>	Satisfying	<u>N</u>	Boring
<u>N</u>	Routine	<u>N</u>	Slow
<u>N</u>	Boring	<u>y</u>	Ambitious
<u>y</u>	Good	<u>N</u>	Stupid
<u>y</u>	Creative	<u>y</u>	Responsible
<u>y</u>	Respected	<u>y</u>	Fast
<u>N</u>	Hot	<u>y</u>	Intelligent
<u>y</u>	Pleasant	<u>N</u>	Easy to make enemies
<u>y</u>	Useful	<u>N</u>	Talk too much
<u>N</u>	Tiresome	<u>y</u>	Smart
<u>y</u>	Healthful	<u>N</u>	Lazy
<u>y</u>	Challenging	<u>N</u>	Unpleasant
<u>N</u>	On your feet	<u>N</u>	No privacy
<u>N</u>	Frustrating	<u>y</u>	Active
<u>N</u>	Simple	<u>N</u>	Narrow interests
<u>N</u>	Endless	<u>y</u>	Loyal
<u>y</u>	Gives sense of accomplishment	<u>N</u>	Hard to meet

Pay

<u>Y</u>	Income adequate for normal expenses
<u>Y</u>	Satisfactory profit sharing
<u>N</u>	Barely live on income
<u>N</u>	Bad
<u>Y</u>	Income provides luxuries
<u>N</u>	Insecure
<u>N</u>	Less than I deserve
<u>Y</u>	Highly paid
<u>N</u>	Underpaid

Promotions

<u>Y</u>	Good opportunity for promotion
<u>N</u>	Opportunity somewhat limited
<u>Y</u>	Promotion on ability
<u>N</u>	Dead-end job
<u>Y</u>	Good chance for promotion
<u>N</u>	Unfair promotion policy
<u>N</u>	Infrequent promotions
<u>Y</u>	Regular promotions
<u>Y</u>	Fairly good chance for promotion

## APPENDIX C

### Brayfield-Rothe Index

#### Instructions

Some jobs are more interesting and satisfying than others. We want to know how people feel about different jobs. This blank contains eighteen statements about jobs. You are to cross out the phrase below each statement which best describes how you feel about your present job. There are no right or wrong answers. We should like your honest opinion on each one of the statements. Work out the sample item numbered (0).

- |    |   |       |           |          |                   |
|----|---|-------|-----------|----------|-------------------|
| 0. | There are some conditions concerning my job that could be improved. |       |           |          |                   |
|    | STRONGLY AGREE  | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 1. | My job is like a hobby to me.                                       |       |           |          |                   |
|    | STRONGLY AGREE  | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 2. | My job is usually interesting enough to keep me from getting bored. |       |           |          |                   |
|    | STRONGLY AGREE  | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 3. | It seems that my friends are more interested in their jobs.         |       |           |          |                   |
|    | STRONGLY AGREE  | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |

- |     |  |                |       |           |          |                   |
|-----|--|----------------|-------|-----------|----------|-------------------|
| 4.  | I consider my job rather unpleasant.                               | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 5.  | I enjoy my work more than my leisure time.                         | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 6.  | I am often bored at my job.  | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 7.  | I feel fairly well satisfied with my present job.                  | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 8.  | Most of the time I have to force myself to go to work.             | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 9.  | I am satisfied with my job for the time being.                     | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 10. | I feel that my job is no more interesting than others I could get. | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 11. | I definitely dislike my work.                                      | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 12. | I feel that I am happier in my work than most other people.        | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 13. | Most days I am enthusiastic about my work.                         | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 14. | Each day of work seems like it will never end.                     | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 15. | I like my job better than the average worker does.                 | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |

- |     |  |                |       |           |          |                   |
|-----|--|----------------|-------|-----------|----------|-------------------|
| 16. | My job is pretty uninteresting.              | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 17. | I find real enjoyment in my work.            | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |
| 18. | I am disappointed that I ever took this job. | STRONGLY AGREE | AGREE | UNDECIDED | DISAGREE | STRONGLY DISAGREE |

Porter Need Satisfaction Questionnaire

Please do not omit any scales.

1. The feeling of self-esteem a person gets from being in my management position:
 

a) How much is there now?	(min)	1	2	3	4	5	6	7	(max)
b) How much should there be?		1	2	3	4	5	6	7	
c) How important is this to me?		1	2	3	4	5	6	7	
2. The authority connected with my management position:
 

a) How much is there now?	(min)	1	2	3	4	5	6	7	(max)
b) How much should there be?		1	2	3	4	5	6	7	
c) How important is this to me?		1	2	3	4	5	6	7	
3. The opportunity for personal growth and development in my management position:
 

a) How much is there now?	(min)	1	2	3	4	5	6	7	(max)
b) How much should there be?		1	2	3	4	5	6	7	
c) How important is this to me?		1	2	3	4	5	6	7	
4. The prestige of my management position inside the company (that is, the regard received from others in the company):
 

a) How much is there now?	(min)	1	2	3	4	5	6	7	(max)
b) How much should there be?		1	2	3	4	5	6	7	
c) How important is this to me?		1	2	3	4	5	6	7	

5. The opportunity for independent thought and action in my management position:
  - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
  - b) How much should there be? 1 2 3 4 5 6 7
  - c) How important is this to me? 1 2 3 4 5 6 7
  
6. The feeling of security in my management position:
  - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
  - b) How much should there be? 1 2 3 4 5 6 7
  - c) How important is this to me? 1 2 3 4 5 6 7
  
7. The feeling of self-fulfillment a person gets from being in my management position (that is, the feeling of being able to use one's own unique capabilities, realizing one's potentialities):
  - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
  - b) How much should there be? 1 2 3 4 5 6 7
  - c) How important is this to me? 1 2 3 4 5 6 7
  
8. The prestige of my management position outside the company (that is, the regard received from others not in the company):
  - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
  - b) How much should there be? 1 2 3 4 5 6 7
  - c) How important is this to me? 1 2 3 4 5 6 7
  
9. The feeling of worthwhile accomplishment in my management position:
  - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
  - b) How much should there be? 1 2 3 4 5 6 7
  - c) How important is this to me? 1 2 3 4 5 6 7
  
10. The opportunity, in my management position, to give help to other people:
  - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
  - b) How much should there be? 1 2 3 4 5 6 7
  - c) How important is this to me? 1 2 3 4 5 6 7

11. The opportunity, in my management position, for participating in the setting of goals:
  - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
  - b) How much should there be? 1 2 3 4 5 6 7
  - c) How important is this to me? 1 2 3 4 5 6 7
12. The opportunity, in my management position, for participation in the determination of methods and procedures:
  - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
  - b) How much should there be? 1 2 3 4 5 6 7
  - c) How important is this to me? 1 2 3 4 5 6 7
13. The feeling of being informed in my management position:
  - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
  - b) How much should there be? 1 2 3 4 5 6 7
  - c) How important is this to me? 1 2 3 4 5 6 7
14. The opportunity to develop close friendships in my management position:
  - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
  - b) How much should there be? 1 2 3 4 5 6 7
  - c) How important is this to me? 1 2 3 4 5 6 7
15. The feeling of pressure in my management position:
  - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
  - b) How much should there be? 1 2 3 4 5 6 7
  - c) How important is this to me? 1 2 3 4 5 6 7

## APPENDIX D

### Smith's Normative JDI Scores

Normative JDI Scores  
Satisfaction with All JDI Variables: Stratified by Sex

Percentile	Male					Female					Percentile
	Work	Pay	Promotions	Supervision	Co-Workers	Work	Pay	Promotions	Supervision	Co-Workers	
01	07	00	00	08	12	08	00	00	10	12	01
05	15	04	00	18	21	16	05	00	20	20	05
10	21	08	01	25	28	22	07	02	27	25	10
15	25	12	04	30	33	25	11	04	31	30	15
20	27	15	06	33	36	27	13	05	33	33	20
25	30	18	08	35	38	29	16	07	35	36	25
30	31	20	10	37	41	30	19	09	37	38	30
35	33	24	12	39	42	32	22	10	39	40	35
40	35	26	14	41	44	34	23	11	40	42	40
45	36	28	16	42	45	35	25	12	41	43	45
50	38	30	18	44	46	37	28	14	42	44	50
55	39	32	20	45	47	38	30	16	44	45	55
60	40	34	24	45	48	39	32	17	45	46	60
65	42	36	26	47	49	40	34	18	47	48	65
70	43	39	30	48	50	41	36	21	47	49	70
75	44	41	34	48	50	42	37	23	48	50	75
80	45	42	36	50	51	44	40	25	50	51	80
85	47	46	41	51	52	45	42	30	51	52	85
90	48	48	46	51	52	47	44	38	51	53	90
95	50	50	50	52	54	49	48	47	53	53	95
99	52	54	54	54	54	52	52	52	54	54	99
Number per column	1970	1961	1941	1949	1926	638	634	632	636	635	

All of the tables in Appendix D can be found in Patricia Smith, et al., The Measurement of Satisfaction in Work and Retirement (Chicago: Rand-McNally, 1969), Chapter 3.



**Normative JDI Scores**  
**Satisfaction with Pay: Stratified by Individual Income<sup>1</sup> and Sex**

Percentile	Income for Males							Income for Females			
	1	2	3	4	5	6	7-9	0	1	2-5	Percentile
01	00	00	00	00	00	10	18	00	00	03	01
05	00	00	05	15	08	12	26	00	04	10	05
10	04	05	10	19	19	26	31	04	06	12	10
15	08	07	13	24	23	32	32	06	09	17	15
20	11	10	16	25	29	35	34	08	11	21	20
25	12	12	19	29	31	36	36	10	13	23	25
30	15	15	23	30	34	37	39	11	16	25	30
35	17	17	24	32	35	37	42	12	18	28	35
40	18	19	27	34	35	39	44	14	21	31	40
45	19	22	29	35	37	40	46	18	23	33	45
50	21	23	30	36	40	41	46	22	25	34	50
55	24	25	32	38	41	42	47	23	28	35	55
60	25	29	35	40	43	42	47	24	30	36	60
65	28	31	36	41	44	44	47	26	31	39	65
70	29	34	39	42	46	45	48	28	34	41	70
75	31	35	41	45	47	47	49	30	35	42	75
80	34	38	42	47	47	49	50	34	36	44	80
85	39	41	44	48	48	51	51	35	39	47	85
90	41	43	47	50	48	52	52	38	41	48	90
95	46	47	50	52	50	53	53	42	43	50	95
99	51	51	53	54	53	54	54	52	48	53	99
Number per column	166	649	609	210	100	60	48	78	306	226	

**Normative JDI Scores**  
**Satisfaction with Promotions: Stratified by Individual Income<sup>1</sup> and Sex**

Percentile	Income for Males							Income for Females			
	1	2	3	4	5	6	7-9	0	1	2-5	Percentile
01	00	00	00	00	00	00	02	00	00	00	01
05	00	00	00	02	02	02	05	00	00	00	05
10	03	00	00	06	05	10	11	01	01	04	10
15	05	02	04	09	07	15	12	02	04	05	15
20	06	05	05	11	11	17	16	04	05	07	20
25	08	06	07	12	14	21	19	05	06	09	25
30	09	08	10	16	15	23	24	06	07	10	30
35	10	10	11	17	16	24	28	08	09	11	35
40	11	12	13	20	18	28	30	11	11	12	40
45	12	14	16	23	22	29	32	12	11	14	45
50	13	16	17	24	23	34	33	13	12	16	50
55	16	18	18	26	24	36	36	14	14	18	55
60	20	20	20	29	26	39	38	15	16	20	60
65	23	23	23	34	29	41	40	17	17	23	65
70	25	28	28	36	34	44	41	20	18	24	70
75	29	29	30	41	40	45	43	21	20	28	75
80	34	33	35	44	41	47	46	22	23	32	80
85	38	36	40	47	45	50	47	26	24	41	85
90	41	42	42	48	50	51	48	31	30	48	90
95	47	47	50	52	52	53	50	38	40	51	95
99	53	52	53	53	54	54	53	47	49	53	99
Number per column	164	646	598	209	100	59	47	79	303	227	

**Normative JDI Scores**  
**Satisfaction with Co-Workers: Stratified by Individual Income<sup>1</sup> and Sex**

Percentile	Income for Males							Income for Females			
	1	2	3	4	5	6	7-9	0	1	2-5 Percentile	
01	12	09	13	06	18	32	33	12	08	13	01
05	22	20	21	21	23	38	34	20	19	22	05
10	29	26	28	28	28	40	37	24	23	28	10
15	32	31	32	34	32	42	40	32	29	32	15
20	34	35	35	36	37	44	41	35	33	34	20
25	37	37	38	39	40	46	43	38	35	37	25
30	39	39	41	41	44	47	45	39	36	39	30
35	40	41	42	42	45	48	46	40	38	41	35
40	41	43	44	44	46	48	48	41	41	43	40
45	42	44	45	45	47	48	49	42	42	44	45
50	43	45	46	47	48	49	50	43	44	46	50
55	45	46	47	48	48	49	50	44	45	47	55
60	46	47	48	49	50	50	51	45	45	48	60
65	47	48	49	50	50	50	51	47	47	49	65
70	48	49	50	50	51	51	52	48	48	50	70
75	48	50	51	51	52	51	52	49	49	51	75
80	50	51	51	52	52	52	53	50	50	51	80
85	51	51	52	52	53	53	53	51	51	52	85
90	51	52	53	53	53	53	53	52	52	53	90
95	52	53	53	53	54	54	54	53	53	53	95
99	54	54	54	54	54	54	54	54	54	54	99
Number per column	162	644	598	206	94	59	45	79	306	227	

**Normative JDI Scores**  
**Satisfaction with Work: Stratified by Individual Income<sup>1</sup> and Sex**

Percentile	Income for Males							Income for Females			
	1	2	3	4	5	6	7-9	0	1	2-5 Percentile	
01	03	05	09	07	17	11	24	01	07	12	01
05	13	14	17	19	27	18	30	15	15	20	05
10	15	19	23	28	33	27	40	20	21	25	10
15	18	22	26	30	35	35	41	22	23	27	15
20	22	25	28	33	38	38	43	25	25	30	20
25	25	27	30	35	39	40	44	27	28	32	25
30	27	29	32	37	41	41	44	29	29	34	30
35	28	30	34	38	41	42	45	29	30	36	35
40	29	32	36	40	42	44	45	30	32	37	40
45	31	33	37	42	42	44	45	33	33	39	45
50	33	34	38	43	43	45	46	34	35	39	50
55	34	36	40	44	44	46	47	35	36	40	55
60	35	37	41	45	45	46	47	37	38	41	60
65	36	38	42	45	46	47	48	38	39	42	65
70	37	39	44	47	47	48	49	39	40	43	70
75	39	40	45	47	48	50	50	40	41	45	75
80	40	41	45	48	49	50	51	41	43	46	80
85	41	42	47	49	50	51	51	42	44	47	85
90	43	45	48	51	51	51	52	44	46	49	90
95	45	47	50	52	52	52	53	46	48	51	95
99	47	50	52	54	54	54	54	53	50	53	99
Number per column	167	653	612	211	101	60	48	78	306	230	

**Normative JDI Scores**  
**Satisfaction with Pay: Stratified by Education and Sex**

Percentile	Years of Education for Males							Years of Education for Females				Percentile
	4 or less	5-6	7-8	9-10	11-12	13-14	15 or more	4 or less	5-6	7-8	9 or more	
01	00	00	00	00	00	00	02	00	00	00	00	01
05	04	00	04	00	04	06	12	02	04	06	06	05
10	06	06	06	04	10	12	18	06	06	10	10	10
15	10	10	10	08	12	16	22	08	08	12	12	15
20	14	12	12	12	16	18	28	10	10	16	14	20
25	14	16	16	14	18	20	30	12	14	18	18	25
30	18	18	18	18	22	24	32	16	18	22	22	30
35	18	18	20	20	24	26	34	18	20	24	24	35
40	22	20	22	24	26	28	34	20	22	24	24	40
45	24	24	26	26	28	30	36	24	24	28	28	45
50	24	26	28	28	30	32	38	24	28	30	30	50
55	26	28	30	30	32	34	40	26	30	32	34	55
60	28	30	32	34	34	36	42	30	32	34	36	60
65	30	34	34	36	36	38	42	30	34	34	38	65
70	30	36	36	38	38	40	46	34	36	36	40	70
75	32	42	40	40	40	42	46	34	36	38	42	75
80	38	42	42	42	42	42	48	36	40	40	46	80
85	40	44	42	44	46	46	48	40	42	42	46	85
90	42	46	46	48	48	48	50	42	44	44	48	90
95	44	50	48	50	50	50	50	46	48	48	50	95
99	48	54	54	54	54	54	54	50	54	54	54	99
Number per column	58	114	421	383	581	152	234	172	121	262	73	

**Normative JDI Scores**  
**Satisfaction with Promotions: Stratified by Education and Sex**

Percentile	Years of Education for Males							Years of Education for Females				Percentile
	4 or less	5-6	7-8	9-10	11-12	13-14	15 or more	4 or less	5-6	7-8	9 or more	
01	00	00	00	00	00	00	00	00	00	00	00	01
05	02	02	00	00	00	00	00	00	00	00	00	05
10	06	06	02	02	00	00	02	04	02	02	00	10
15	08	08	04	04	02	04	08	06	04	04	02	15
20	08	12	06	06	04	06	10	06	06	06	04	20
25	10	14	08	08	06	08	12	08	06	06	06	25
30	10	16	10	10	08	10	16	10	08	08	06	30
35	12	18	12	12	10	12	16	12	10	10	08	35
40	14	20	12	14	12	14	18	12	12	12	10	40
45	14	22	14	16	16	16	21	14	12	12	10	45
50	18	24	16	18	16	18	22	16	14	14	12	50
55	18	26	18	22	18	22	24	16	16	14	16	55
60	22	28	20	24	21	26	28	18	18	16	18	60
65	24	30	22	28	24	30	30	18	18	18	18	65
70	26	32	26	30	28	34	36	20	22	22	24	70
75	30	36	30	32	32	40	40	22	24	22	28	75
80	34	38	32	36	36	44	42	24	24	26	30	80
85	36	42	36	42	42	48	46	26	30	32	32	85
90	38	44	40	48	48	48	48	32	38	42	42	90
95	42	46	46	50	50	54	50	38	46	48	48	95
99	54	48	54	54	54	54	54	50	50	54	54	99
Number per column	57	113	414	381	575	149	233	171	122	261	73	

**Normative JDI Scores**  
**Satisfaction with Co-Workers: Stratified by Education and Sex**

Percentile	Years of Education for Males							Years of Education for Females				Percentile
	4 or less	5-6	7-8	9-10	11-12	13-14	15 or more	4 or less	5-6	7-8	9 or more	
01	19	09	12	08	10	12	14	11	03	13	12	01
05	21	26	22	21	20	20	24	22	18	22	19	05
10	28	29	29	28	26	24	32	28	23	25	21	10
15	35	32	33	32	31	30	36	33	27	30	29	15
20	36	35	36	35	35	34	39	35	30	33	33	20
25	39	38	38	39	37	37	41	36	34	36	36	25
30	41	40	40	41	39	39	43	39	36	38	38	30
35	42	42	42	42	41	41	45	41	38	40	40	35
40	43	43	43	44	43	43	46	42	40	42	42	40
45	45	44	45	45	44	43	47	43	41	44	44	45
50	46	45	46	46	45	46	48	44	42	45	45	50
55	47	45	47	47	47	48	48	45	43	46	47	55
60	47	47	48	48	48	48	50	46	45	47	49	60
65	48	47	49	48	49	50	50	47	46	48	50	65
70	48	48	50	50	50	50	51	48	48	49	51	70
75	49	49	50	50	51	51	51	49	49	50	51	75
80	49	50	51	51	51	51	52	51	50	51	52	80
85	50	51	52	52	52	52	52	51	51	52	52	85
90	51	51	52	52	52	52	54	53	52	52	52	90
95	52	52	54	54	54	54	54	54	54	54	54	95
99	54	54	54	54	54	54	54	54	54	54	54	99
Number per column	57	113	412	379	572	144	228	174	121	263	71	

**Normative JDI Scores**  
**Satisfaction with Work: Stratified by Education and Sex**

Percentile	Years of Education for Males							Years of Education for Females				Percentile
	4 or less	5-6	7-8	9-10	11-12	13-14	15 or more	4 or less	5-6	7-8	9 or more	
01	00	00	09	04	03	06	11	00	06	12	07	01
05	15	13	17	15	14	12	22	16	17	16	21	05
10	21	23	21	22	20	18	28	21	23	21	23	10
15	24	25	24	26	25	22	33	24	26	25	27	15
20	25	26	26	28	27	28	36	26	29	27	30	20
25	27	27	28	30	30	32	38	27	30	30	31	25
30	28	29	30	32	32	36	40	28	32	31	33	30
35	29	29	32	33	34	39	41	29	33	33	36	35
40	29	30	33	35	36	40	42	30	35	35	38	40
45	30	31	35	36	37	41	44	32	36	37	39	45
50	30	32	35	37	38	42	45	33	37	38	40	50
55	31	33	36	38	40	43	45	34	38	39	40	55
60	34	35	38	39	41	44	46	36	39	40	41	60
65	35	35	39	41	42	45	47	37	40	41	42	65
70	36	36	39	42	44	47	47	39	41	43	43	70
75	37	38	41	44	45	47	48	40	42	44	44	75
80	38	39	42	45	45	48	49	41	44	45	46	80
85	39	41	44	46	47	49	50	43	45	47	47	85
90	40	43	45	48	48	51	51	44	47	48	48	90
95	42	45	47	50	49	52	52	46	49	51	48	95
99	45	46	51	51	52	54	54	49	51	54	51	99
Number per column	58	114	425	382	583	152	234	172	122	264	73	

**Normative JDI Scores**  
**Satisfaction with Pay: Stratified by Job Tenure and Sex**

Years on the Job for Males						Years on the Job for Females					
Percentile	0-3	4-6	7-9	10-15	16 or more	Percentile	0-3	4-6	7-9	10-15	16 or more
01	00	00	00	00	00	01	00	00	00	00	00
05	02	04	04	04	04	05	04	04	06	04	08
10	06	08	08	08	08	10	06	06	10	08	12
15	10	12	10	12	12	15	10	08	12	10	14
20	12	16	14	16	14	20	12	10	14	14	18
25	16	18	18	18	18	25	14	12	16	18	22
30	18	22	22	22	20	30	18	14	18	20	24
35	20	24	24	24	24	35	20	18	22	22	28
40	22	26	26	28	26	40	22	20	24	24	30
45	24	28	28	30	28	45	24	22	26	26	32
50	28	30	30	32	30	50	26	24	26	28	34
55	30	30	32	34	34	55	28	26	28	30	34
60	34	34	36	36	36	60	30	26	30	34	36
65	36	36	38	36	38	65	32	30	32	36	36
70	38	36	40	38	40	70	34	34	34	36	40
75	40	40	42	40	42	75	36	36	36	38	40
80	42	42	42	42	44	80	38	36	36	42	42
85	46	42	46	44	46	85	40	40	38	42	44
90	48	46	48	48	48	90	42	44	42	46	48
95	50	48	50	50	50	95	48	44	48	48	50
99	54	54	54	54	54	99	50	54	54	54	54
Number in column	432	319	206	471	514	190	119	59	123	135	

**Normative JDI Scores**  
**Satisfaction with Promotions: Stratified by Job Tenure and Sex**

Years on the Job for Males						Years on the Job for Females					
Percentile	0-3	4-6	7-9	10-15	16 or more	Percentile	0-3	4-6	7-9	10-15	16 or more
01	00	00	00	00	00	01	00	00	00	00	00
05	00	00	00	00	00	05	00	00	00	00	00
10	04	02	02	00	00	10	04	04	00	04	00
15	08	04	06	02	04	15	04	04	02	06	02
20	10	06	06	04	06	20	06	06	04	06	04
25	12	10	08	06	06	25	08	06	06	08	06
30	15	10	10	08	10	30	10	08	08	10	06
35	16	12	12	10	12	35	10	10	10	12	08
40	18	16	14	10	12	40	12	12	10	12	10
45	22	18	16	12	14	45	14	12	12	14	10
50	24	18	18	16	16	50	16	12	14	16	12
55	28	22	20	18	18	55	16	14	16	18	14
60	30	24	22	20	21	60	18	16	16	18	16
65	34	28	26	22	24	65	20	16	18	20	18
70	36	30	30	24	26	70	22	18	20	22	18
75	40	30	34	30	30	75	25	20	22	24	22
80	42	34	36	34	34	80	28	22	30	26	24
85	48	40	42	38	38	85	32	28	32	32	26
90	50	44	44	42	42	90	40	36	38	38	30
95	54	48	50	48	50	95	48	48	44	48	42
99	54	54	54	54	54	99	54	50	48	54	50
Number in column	433	314	205	468	501	188	120	59	122	136	

**Normative JDI Scores**  
**Satisfaction with Co-Workers: Stratified by Job Tenure and Sex**

Years on the Job for Males						Years on the Job for Females									
Percentile	0-3	4-6	7-9	16 or more		0-3	4-6	7-9	16 or more		Percentile				
				10-15	more				10-15	more					
01	13	17	10	08	10	07	13	15	15	03	01				
05	21	21	21	23	22	18	22	22	23	17	05				
10	29	26	27	29	29	24	24	27	31	24	10				
15	33	32	32	33	33	29	32	30	34	28	15				
20	36	35	36	35	36	33	33	32	36	31	20				
25	38	37	39	38	39	35	36	33	38	36	25				
30	40	39	41	41	41	37	38	36	39	37	30				
35	42	41	42	42	42	40	40	38	40	39	35				
40	43	43	43	44	44	42	42	39	43	41	40				
45	45	44	45	45	45	44	43	41	44	42	45				
50	47	45	45	46	46	45	44	42	45	43	50				
55	48	47	47	47	47	46	45	43	46	44	55				
60	48	48	48	48	48	47	46	45	47	45	60				
65	49	48	48	48	49	48	48	46	48	46	65				
70	50	50	50	50	50	49	50	48	49	48	70				
75	51	51	50	50	50	50	51	50	50	49	75				
80	51	51	51	51	51	51	51	51	51	51	80				
85	52	52	52	52	52	52	53	52	51	52	85				
90	52	52	52	52	52	52	53	52	52	52	90				
95	54	54	54	54	54	54	54	54	52	54	95				
99	54	54	54	54	54	54	54	54	54	54	99				
Number in column						429	317	201	459	505	190	119	59	124	135

**Normative JDI Scores**  
**Satisfaction with Work: Stratified by Job Tenure and Sex**

Years on the Job for Males						Years on the Job for Females									
					16 or						16 or				
Percentile	0-3	4-6	7-9	10-15	more	0-3	4-6	7-9	10-15	more	Percentile				
01	03	09	03	07	09	07	12	00	08	00	01				
05	12	14	15	17	17	18	15	16	18	14	05				
10	18	21	21	23	23	23	22	20	24	17	10				
15	22	25	26	26	27	25	24	24	26	22	15				
20	26	28	27	27	29	28	27	27	29	25	20				
25	28	30	30	29	30	30	29	28	30	27	25				
30	31	33	32	31	32	32	30	30	31	29	30				
35	33	35	34	33	33	33	31	30	34	30	35				
40	35	36	35	34	35	35	33	31	35	32	40				
45	36	38	36	36	36	36	35	33	37	33	45				
50	39	39	37	38	37	38	36	34	38	35	50				
55	40	40	38	39	38	39	37	36	39	38	55				
60	42	41	40	40	39	40	39	37	39	39	60				
65	43	42	41	41	41	41	40	38	40	40	65				
70	44	43	42	42	42	42	41	39	41	41	70				
75	45	44	44	44	44	44	43	40	42	42	75				
80	46	45	45	45	45	45	44	42	44	44	80				
85	47	46	47	47	45	46	45	43	45	46	85				
90	49	48	48	48	47	47	46	45	47	48	90				
95	51	50	51	51	49	49	49	50	48	49	95				
99	54	52	54	54	52	51	52	51	51	54	99				
Number in						431	321	207	474	515	190	122	59	123	135
column															

APPENDIX E

Letter of Introduction to  
Small Business Owners



# BETHANY NAZARENE COLLEGE

Bethany, Oklahoma 73008

Telephone 405/789-6400

DIVISION OF BUSINESS

Larry Mills  
Associate Professor  
Of Management

March 8, 1977

Would you be willing to trade 20 minutes of your employees' time for a better knowledge of small business employee's attitudes and interests in this area? I am involved in a research project for my dissertation at the University of Oklahoma. This letter is being sent to all small businesses in Bethany with two or more full-time employees. Let me give you a brief explanation of this project.

The research information needed in this study will be gathered from your employees on three questionnaires. One questionnaire will ask general information, such as age, sex, education, etc. The second questionnaire will be a job description index asking for responses in the areas of pay, co-workers, promotion, and work itself. The third questionnaire will ask 32 questions related to where one's interest lies, on the job or off the job. The second and third questionnaires have been used in numerous national studies. The total time needed to complete all three questionnaires should be about 20 minutes. An envelope will be dropped off in the morning and personalized to each individual full-time employee. The employee will complete the questionnaires, seal the envelope, and it will be picked up later that afternoon.

No individual firms or employees will be identified in the published findings. All results will be published in terms of groups, such as type of business, age, educational level, etc. You will be sent a summary of the research results!

In the near future I, or one of my associates, will contact you and give you opportunity to participate in this project. I believe you as a small business owner can benefit greatly from the results of this effort. I will greatly appreciate your participation. If you have any unanswered questions, please call me at the college or my home (789-4377).

I am sincere in my desire to serve you as well as meet my own educational goals. I look forward to working with you in completing this project.

Respectfully,

A handwritten signature in cursive script that reads "Larry W. Mills".

Larry W. Mills  
Professor of Management





# BETHANY NAZARENE COLLEGE

Bethany, Oklahoma 73008

Telephone 405/789-6400

DIVISION OF BUSINESS

Larry Mills  
Associate Professor  
Of Management

April 11, 1977

Would you be willing to trade 20 minutes of your employees' time for a better understanding of small business employees' attitudes and interests in this area? I am involved in a research project for my dissertation at the University of Oklahoma. This letter is being sent to many small businesses in Warr Acres with two or more full-time employees. Let me give you a brief explanation of this project.

The research information needed in this study will be gathered from your employees on three questionnaires. One questionnaire will ask general information, such as age, sex, education, etc. The second questionnaire will be job description index asking for responses in the areas of pay, co-workers, promotion, and work itself. The third questionnaire will ask 32 questions related to where one's interest lies, on the job or off the job. The second and third questionnaires have been used in numerous national studies. The total time needed to complete all three questionnaires should be about 20 minutes. An envelope will be dropped off in the morning and personalized to each individual full-time employee. The employee will complete the questionnaires, seal the envelope, and it will be picked up that afternoon.

No individual firms or employees will be identified in the published findings. All results will be published in terms of groups, such as type of business, age, education level, etc. You will be sent a summary of the research findings!

In the near future I, or one of my associates, will contact you and give you opportunity to participate in this project. I believe you as a small business owner can benefit greatly from the results of this effort. I will greatly appreciate your participation. If you have any unanswered questions, please call me at the college or my home (789-4377).

I am sincere in my desire to serve you as well as meet my own educational goals. I look forward to working with you in completing this project.

Respectfully,

A handwritten signature in cursive script, reading "Larry W. Mills".

Larry W. Mills  
Professor of Management

## APPENDIX F

Chi-Square Calculations:  $H_{12}$ ,  $H_{15}$ ,  $H_{18}$ ,  $H_{21}$

### Chi-Square Calculations for Sex Variable and CLI Response

Sex	JO	NP	NJO	Total
Male	23	68	55	146
Female	26	143	111	280
	49	211	166	426

$$\chi^2 = 36/17 + 16/72 + 4/57 + 36/32 + 16/139 + 4/109 = 3.69^*$$

d.f. = 2

- Notes:
1. \*significant at  $\alpha = .25$
  2. non-significant at  $\alpha = .10$
  3. JO = job-oriented
  4. NP = no preference
  5. NJO = non-job-oriented

Chi-Square Calculations for Age  
Variable and CLI Response

Age	JO	NP	NJO	Total
0-24	16	65	57	138
25-29	10	33	34	77
30-39	9	51	30	90
40-49	6	31	25	62
50-up	8	32	19	59
	49	212	165	426

$$\chi^2 = 0/16 + 16/69 + 16/53 + 1/9 + 25/38 + 16/30 \\ + 1/10 + 36/45 + 25/35 + 1/7 + 0/31 + 1/24 \\ + 1/7 + 9/29 + 16/23 = 4.78^*$$

d.f. = 8

Notes: 1. \*significant at  $\alpha = .90$   
2. non-significant at  $\alpha = .75$

Chi-Square Calculations for Education  
Variable and CLI Response

Education Level	JO	NP	NJO	Total
0-10	4	16	15	35
11-12	19	97	65	181
13-14	15	56	58	129
15-up	12	43	30	85
	50	212	168	430

$$\chi^2 = 0/4 + 1/17 + 1/14 + 4/21 + 64/89 + 36/71 + \\ 0/15 + 64/64 + 64/50 + 4/10 + 1/42 + 9/33 \\ = 4.52^*$$

d.f. = 8

Notes: 1. \*significant at  $\alpha=.75$   
2. non-significant at  $\alpha=.50$

Chi-Square Calculations for Job Tenure  
Variable and CLI Response

Tenure (Years)	JO	NP	NJO	Total
0-3	36	142	123	301
4-9	7	50	33	90
10-up	7	20	11	38
	50	212	167	429

$$\chi^2 = 1/35 + 49/149 + 36/117 + 9/10 + 36/44 + \\ 4/35 + 4/5 + 1/19 + 16/15 = 4.42^*$$

d.f. = 4

Notes: 1. \*significant at  $\alpha = .50$   
 2. non-significant at  $\alpha = .25$

# APPENDIX G

## Statistical Calculations for Analysis of Variance: H<sub>11</sub>, H<sub>14</sub>, H<sub>17</sub>, H<sub>20</sub>

### Statistical Calculations for Analysis Variance Related to Hypothesis II

	Source	df	SS	MS	F
WORK	Total	425	44648.29		
	Sex	1	206.05	206.05	1.97
	Error	424	44442.24	104.82	
	$\bar{X}_1=32.69$		$\bar{X}_2=34.16$		
	$N_1=146$		$N_2=280$		
PAY	Total	425	24442.63		
	Sex	1	778.87	728.87	13.03*
	Error	424	23713.76	55.93	
	$\bar{X}_1=14.53$		$\bar{X}_2=11.77$		
PRO- MOTION	Total	425	27973.91		
	Sex	1	579.59	579.59	8.97*
	Error	424	27394.32	64.61	
	$\bar{X}_1=12.24$		$\bar{X}_2=9.78$		
CO- WORKER	Total	425	71819.12		
	Sex	1	67.97	67.97	.40
	Error	424	71751.15	169.22	
	$\bar{X}_1=39.14$		$\bar{X}_2=39.98$		
COM- POSITE	Total	425	677794.80		
	Sex	1	6327.10	6327.10	4.00*
	Error	424	671467.7	1583.65	
	$\bar{X}_1=125.36$		$\bar{X}_2=117.24$		

- Notes:
1.  $F(1, \infty) = 3.84$
  2.  $\alpha = .05$
  3.  $\bar{X}_1 = \text{male}$
  4.  $\bar{X}_2 = \text{female}$

Statistical Calculations for Analysis  
Variance Related to Hypothesis 14

	Source	df	SS	MS	F
WORK	Total	425	43975.13		
	Ages	4	2005.45	501.36	5.029*
	Error	421	41969.68	99.69	
	$\bar{X}_1=31.02$	$\bar{X}_2=33.66$	$\bar{X}_3=34.26$	$\bar{X}_4=36.39$	$\bar{X}_5=36.73$
	$N_1=138$	$N_2=77$	$N_3=90$	$N_4=62$	$N_5=59$
PAY	Total	425	24671.77		
	Ages	4	106.18	26.55	.45
	Error	421	24565.59	58.35	
	$\bar{X}_1=12.84$	$\bar{X}_2=11.61$	$\bar{X}_3=12.77$	$\bar{X}_4=12.82$	$\bar{X}_5=13.15$
PRO- MOTION	Total	425	27923.63		
	Ages	1	85.56	21.39	.32
	Error	421	27838.07	66.12	
	$\bar{X}_1=10.91$	$\bar{X}_2=11.09$	$\bar{X}_3=10.09$	$\bar{X}_4=9.90$	$\bar{X}_5=10.61$
CO- WORKER	Total	425	71532.06		
	Ages	1	35.05	8.76	.05
	Error	421	71497.01	169.83	
	$\bar{X}_1=39.79$	$\bar{X}_2$	$\bar{X}_3=39.68$	$\bar{X}_4=39.65$	$\bar{X}_5=39.20$
COM- POSITE	Total	425	678570.10		
	Ages	4	1483.40	370.85	.23
	Error	421	677086.7	1608.28	
	$\bar{X}_1=118.32$	$\bar{X}_2=118.13$	$\bar{X}_3=119.64$	$\bar{X}_4=121.48$	$\bar{X}_5=123.46$

Notes: 1.  $F(4, \infty) = 2.37$   
2.  $\alpha = .05$

Statistical Calculations for Analysis  
Variance Related to Hypothesis 17

	Source	df	SS	MS	F
WORK	Total	429	44789.22		
	Education	3	2198.32	732.77	7.33*
	Error	426	42590.90	99.98	
	$\bar{X}_1=26.77$	$\bar{X}_2=33.12$	$\bar{X}_3=35.29$	$\bar{X}_4=34.95$	
	$N_1=35$	$N_2=181$	$N_3=129$	$N_4=85$	
PAY	Total	429	24900.58		
	Education	3	1139.80	379.93	6.81*
	Error	426	23760.78	55.78	
	$\bar{X}_1=7.31$	$\bar{X}_2=12.63$	$\bar{X}_3=13.59$	$\bar{X}_4=13.25$	
PRO- MOTION	Total	429	28251.00		
	Education	3	556.24	185.41	2.85*
	Error	426	27694.76	65.01	
	$\bar{X}_1=7.63$	$\bar{X}_2=11.31$	$\bar{X}_3=11.18$	$\bar{X}_4=9.45$	
CO- WORKER	Total	429	72535.50		
	Education	3	3636.91	1212.30	7.50*
	Error	426	68898.59	161.73	
	$\bar{X}_1=30.23$	$\bar{X}_2=40.08$	$\bar{X}_3=39.52$	$\bar{X}_4=42.08$	
COM- POSITE	Total	429	687361.70		
	Education	3	41443.90	13814.63	9.11*
	Error	426	645917.80	1516.24	
	$\bar{X}_1=86.88$	$\bar{X}_2=121.09$	$\bar{X}_3=124.35$	$\bar{X}_4=122.42$	

Notes: 1.  $F(2, \infty) = 3.00$   
2.  $\alpha = .05$



Statistical Calculations for Analysis  
Variance Related to Hypothesis 20

	Source	df	SS	MS	F
WORK	Total	428	44370.3		
	Tenure	2	737.75	368.88	3.60*
	Error	426	43632.55	102.42	
	$\bar{X}_1=33.32$	$\bar{X}_2=33.37$	$\bar{X}_3=37.95$		
	$N_1=301$	$N_1=90$			
PAY	Total	428	24367.25		
	Tenure	2	297.66	148.83	2.63
	Error	426	24069.59	56.50	
	$\bar{X}_1=12.15$	$\bar{X}_2=13.72$	$\bar{X}_3=14.42$		
PRO- MOTION	Total	428	28059.55		
	Tenure	2	237.54	118.77	1.81
	Error	426	27822.01	65.31	
	$\bar{X}_1=11.13$	$\bar{X}_2=9.42$	$\bar{X}_3=9.74$		
CO- WORKER	Total	428	72181.05		
	Tenure	2	27.59	13.80	.08
	Error	426	72153.46	169.37	
	$\bar{X}_1=39.59$	$\bar{X}_2=39.63$	$\bar{X}_3=38.71$		
COM- POSITE	Total	428	674823.10		
	Tenure	2	1065.10	532.55	.34
	Error	426	673758.00	1581.59	
	$\bar{X}_1=119.48$	$\bar{X}_2=119.29$	$\bar{X}_3=124.97$		

Notes: 1.  $F(2, \infty) = 3.00$   
2.  $\alpha = .05$

## APPENDIX H

### Starcevich Research Results

THE PREFERENCE FOR INFORMAL GROUP EXPERIENCE OF  
FIRST-LINE MANAGERS, MIDDLE MANAGERS, AND  
PROFESSIONAL EMPLOYEES STUDIED AND  
INDUSTRIAL WORKERS STUDIED BY DUBIN

Preference for informal groups experience	<u>Employees' Response in Present Study</u>									
	Indus- trial workers (Dubin)		Total re- sponse for employees studied		First- line managers		Middle managers		Profes- sional employees	
	#	%	#	%	#	%	#	%	#	%
Job- oriented	44	9.0	92	17.8	27	17.4	34	18.7	31	17.1
Non-job- oriented	447	91.0	426	82.2	128	82.6	148	81.3	150	82.9
Total N	491		518		155		182		181	

Source: Matthew Starcevich, op cit. (1971), p. 151.

THE PREFERENCE FOR GENERAL EXPERIENCES OF FIRST-LINE  
MANAGERS, MIDDLE MANAGERS, PROFESSIONAL EMPLOYEES  
STUDIED AND FOR THE INDUSTRIAL WORKERS  
STUDIED BY DUBIN

Preference for general experience	Employees of Present Study									
	Indus- trial workers (Dubin)		Total re- sponse for employees studied		First- line managers		Middle managers		Profes- sional employees	
	#	%	#	%	#	%	#	%	#	%
Job- oriented	74	15.0	196	37.8	47	30.3	81	44.5	68	37.6
Non-job- oriented	417	85.0	322	62.2	108	69.7	101	55.1	113	62.4
Total N	491		518		155		182		181	

Source: Matthew Starcevich, op. cit. (1971), p. 155.

THE PREFERENCE FOR ORGANIZATIONAL EXPERIENCE OF  
FIRST-LINE MANAGERS, MIDDLE MANAGERS, AND  
PROFESSIONAL EMPLOYEES STUDIED, AND THE  
INDUSTRIAL WORKERS STUDIED BY DUBIN

Preference for organiza- tional experiences	Results of Present Study									
	Indus- trial workers (Dubin)		Total re- sponse for employees studied		First- line managers		Middle managers		Profes- sional employees	
	#	%	#	%	#	%	#	%	#	%
Job- oriented	300	61.0	439	84.7	134	86.5	163	89.6	142	78.5
Non-job- oriented	191	39.0	79	15.3	21	13.5	19	10.4	39	21.5
Total N	491		518		155		182		181	

Source: Matthew Starcevich, op. cit. (1971), p. 160.

THE PREFERENCE FOR TECHNICAL RELATIONS OF THE FIRST-LINE  
MANAGERS, MIDDLE MANAGERS, AND PROFESSIONAL EMPLOYEES  
STUDIED, AND INDUSTRIAL WORKERS STUDIED BY DUBIN

Preference for Technical Relations	Indus- trial workers (Dubin)		Total re- sponse for employees studied		First- line managers		Middle managers		Profes- sional employees	
	#	%	#	%	#	%	#	%	#	%
Job- oriented	309	63.0	410	79.2	121	78.1	142	78.0	147	81.2
Non-job- oriented	182	37.0	108	20.8	34	21.9	40	22.0	34	18.8
Total N	491		518		155		182		181	

Source: Matthew Starcevich, op cit. (1971), p. 165.

## BIBLIOGRAPHY

### Books

- Baumbach, Clifford M.; Lawyer, Kenneth; and Kelley, Pearce C. How to Organize and Operate a Small Business. Fifth edition, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973.
- Beer, M. Leadership, Employee Needs, and Motivation. Columbus: Bureau of Business Research, Ohio State University, 1966.
- Blauner, Robert. Alienation and Freedom: The Factory Worker and His Industry. Chicago: The University of Chicago Press, 1964.
- Broom, H. N., and Longnecker, Justin G. Small Business Management. Fourth edition. Cincinnati: South-Western Publishing Company, 1975.
- Carroll, Bonnie. Job Satisfaction; A Review of the Literature. Ithaca, New York State School of Industrial and Labor Relations, Cornell University, 1969.
- Dubin, Robert, ed. Handbook of Work, Organization, and Society. Chicago: Rand McNally College Publishing Company, 1976.
- Dubin, Robert. Working Union Management Relations. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1958b.
- Dubin, Robert. The World of Work: Industrial Society and Human Relations. Englewood Cliffs, New Jersey: Prentice-Hall, 1958a.
- Dubin, Robert. Human Relations in Administration. 2nd ed. Englewood Cliffs, New Jersey: Prentice-Hall, 1961.
- Dubin, Robert. "Work and Non-Work: Institutional Perspectives," in M. D. Dunnette, ed., Work and Non-Work in the year 2001. Monterey, California: Brooks/Cole Publishing Company, 1973.

- Dostoyevsky, Fyodor. The House of the Dead. London: William Heineman, 1915.
- Fleishman, Edwin, and Bass, Alan. Studies in Personnel and Industrial Psychology. Third edition. Homewood, Illinois: The Dorsey Press, 1974.
- Getzels, J. W.; Linham, J. M.; and Campbell, R. F. Educational Administration as a Social Process. New York: Harper and Row, 1968.
- Glueck, William F. Personnel: A Diagnostic Approach. Dallas: Business Publications, Inc., 1974.
- Herzberg, F.; Mausner, B.; Peterson, R. O., and Capwell, D. Job Attitudes: Review of Research and Opinion. Pittsburgh: Psychological Service of Pittsburgh, 1957.
- Herzberg, Frederick. The Motivation to Work. New York: John Wiley and Sons, Inc., 1959.
- Herzberg, Frederick. Work and the Nature of Man. Cleveland: World Publishers, 1966.
- Hinrichs, John R. The Motivation Crisis; Winding Down and Turning Off. New York: AMACOM, 1974.
- Hoppock, R. Job Satisfaction. New York: Harper and Brothers, 1935.
- Hull, R. L., and Kolstad, A. "Morale on the Job." In G. Watson, ed., Civilian Morale. Boston: Houghton-Mifflin, 1942.
- Kornhauser, Arthur. Mental Health of the Industrial Worker: A Detroit Study. (With the Collaboration of Otto M. Reid). New York: John Wiley and Sons, Inc., 1965.
- Lewis, E. C. Developing Women's Potential. Ames, Iowa: Iowa State University Press, 1968.
- Likert, Rensis. A Technique for Measurement of Attitudes, Archives of Psychology, No. 140. New York: Columbia University, 1932.
- Lofquist, L. H., and Dawis, R. V. Adjustment to Work. New York: Appleton-Century-Crofts, 1969.
- Macfarlane, William N. Principles of Small Business Management. New York: McGraw-Hill Company, 1977.

- Maslow, Abraham. Motivation and Personality. New York: Harper and Brothers, 1954.
- Mossin, Albert C. Selling Performance and Contentment in Relation to School Background. New York: Columbia University, Teachers College Publications, 1939.
- Overall, J. E., and Klett, C. J. Applied Multivariate Analysis. New York: McGraw-Hill, 1972.
- Peak, Helen. "Attitude and Motivation," in Marshall Jones, ed., Nebraska Symposium on Motivation. Lincoln, Nebraska: University of Nebraska Press, 1955. pp. 149-159.
- Pelz, D. C., and Andrews, F. M. Scientists in Organizations: Productive Climates for Research and Development. New York: John Wiley and Sons, Inc., 1966.
- Pickle, Hal, and Abrahamson, Royce. Small Business Management. Santa Barbara, California: John Wiley and Sons, Inc., 1976.
- Porter, Lyman, and Lawler, Edward. Managerial Attitudes and Performance. Homewood, Illinois: Richard D. Irwin, Inc., 1968b.
- Robinson, John; Athanasion, Robert; and Head, Kendra. Measures of Occupational Attitudes and Occupational Characteristics. Ann Arbor, Michigan: Institute for Social Research, 1969.
- Roethlisberger, F. J., and Dickson, W. J. Management and the Worker. Cambridge: Harvard University Press, 1939.
- Sayles, Leonard, and Strauss, George. Human Behavior in Organizations. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1966.
- Schabacker, Joseph C. Small Business Information Sources: (An Annotated Bibliography). National Council for Small Business Management Development, 1976.
- Scott, Walter D. and Hayes, M. H. S. Science and Common Sense in Working with Men. New York: Ronald Press, 1921.
- Siegel, S. Nonparametric Statistics. New York: McGraw-Hill, 1956.



- Siropolis, Nicholas. Small Business Management. Boston: Houghton-Mifflin Company, 1977.
- Smith, Patricia; Kendall, Lorene; and Hulin, Charles L. The Measurement of Satisfaction in Work and Retirement: A Strategy for the Study of Attitudes. Chicago: Rand McNally, 1969.
- Steinmetz, Lawrence L.; Kline, John B.; and Stegall, Donald P. Managing the Small Business. Homewood, Illinois: Richard D. Irwin, Inc., 1968.
- Strauss, George. "Some Notes on Power Equalization," in H. J. Leavitt, ed., The Social Science of Organizations. Englewood Cliff, N. J.: Prentice-Hall, Inc., 1963.
- Sullivan, Daniel. Small Business Management: A Practical Approach. Dubuque, Iowa: Wm. C. Brown Co., 1977.
- Tate, Curtis E.; Megginson, Leon C.; Scott, Charles R.; and Trueblood, Lyle R. Successful Small Business Management. Dallas: Business Publications, Inc., 1975.
- Tatsuoka, M. M. Discriminant Analysis: The Study of Group Differences. Champaign, Illinois: Institute for Personality and Ability Testing, 1970.
- Thurstone, L. L., and Chave, E. J. The Measurement of Attitude. Chicago: University of Chicago Press, 1929.
- Turner, A. N., and Lawrence, P. R. Industrial Jobs and the Worker. Boston: Harvard University Graduate School of Business Administration, 1965.
- Vroom, Victor. Work and Motivation. New York: Wiley, 1964.
- Weiss, D.; Dawes, R.; England, G.; and Lofquist, L. Manual for Minnesota Satisfaction Questionnaire: Bulletin 45. Minneapolis: University of Minnesota, Industrial Relations Center, 1967.
- Wilensky, Harold. "Varieties of Work Experience." Reprinted in Henry Borrow, ed., Man in a World at Work. Boston: Houghton-Mifflin Company, 1964, pp. 125-154.
- Zaleznik, A., Christensen, C. R., and Roethlisberger, F. J. The Motivation, Productivity, and Satisfaction of Workers. Boston: Harvard University Press, 1958.

### Articles

- Alderfer, Clayton P. "Convergent and Discriminant Validation of Satisfaction and Desire Measures by Interview and Questionnaires." Journal of Applied Psychology, 51 (1967), 509-520.
- Alderfer, Clayton P. "Comparison of Questionnaire Responses With and Without Preceding Interviews." Journal of Applied Psychology, 52 (1968), 335-340.
- Alderfer, C. P. "Effects of Variations in Relatedness Need Satisfaction on Relatedness Desires." Administrative Science Quarterly, 19 (December, 1974), 507-532.
- Alluto, Joseph A. "Some Dynamics of Questionnaire Completion and Return Among Professional and Managerial Personnel: The Relative Impacts of Reception at Work Site or Place of Residence." Journal of Applied Psychology, 54 (1970), 430-432.
- Altimus, Cyrus A., and Tersine, Richard J. "Chronological Age and Job Satisfaction: The Young Blue Collar Worker." Academy of Management Journal, 16 (March, 1973), 53-66.
- Armstrong, T. B. "Job Content and Context Factors Related to Satisfaction for Different Occupational Levels." Journal of Applied Psychology, 55, (1971), 57-65.
- Ash, Phillip. "The SRA Employee Inventory—A Statistical Analysis." Personnel Psychology, 7, (1954), 337-364.
- Baird, Lloyd. "Relationship of Performance to Satisfaction in Stimulating and Nonstimulating Jobs." Journal of Applied Psychology, 61. (1976), 721-727.
- Baum, Bernard H., and Sorensen, Peter. "Behavioral Science Findings on Influence in Organizations: Management Implications." Journal of Small Business Management. (July, 1970), 16-21.
- Benge, E. J., and Copell, D. "Employee Morale Survey." Modern Management, 7, (1947), 19-22.
- Benge, E. J. "How to Learn What the Workers Think of Jobs and Boss." Factory Management Maintenance, 102, (1944), 101-104.

- Berdie, D. R. "Questionnaire Length and Response Rate." Journal of Applied Psychology, 58, (1973), 248-280.
- Bernberg, R. E. "Socio-psychological Factors in Industrial Morale, III. Relation of Age to Morale." Personnel Psychology, 7, (1954), 395-399.
- Blood, M. R. "Work Values and Job Satisfaction." Journal of Applied Psychology, 53, (1969), 456-459.
- Blood, W.; Harwood, J.; and Vernon, H. M. "Discussion on Effects of War-time Industrial Conditions on Mental Health." Proceedings of Royal Society of Medicine, 35, (1942), 693-698.
- Blood, M. R., and Hulin, C. L. "Alienation, Environmental Characteristics, and Worker Response." Journal of Applied Psychology, 51, (1967), 284-290.
- Brockman, V. M. "The Herzberg Controversy." Personnel Psychology, 24, (1971), 155-189.
- Brayfield, A. H., and Rothe, H. F. "An Index of Job Satisfaction." Journal of Applied Psychology, 35, (1951), 307-311.
- Brayfield, Arthur, and Crockett, W. "Employee Attitudes and Employee Performance." Psychological Bulletin, 52, (1955), 396-424.
- Campbell, D. T., and Fiske, D. W. "Convergent and Discriminant Validation by the Multitrait-Multimethod Matrix." Psychological Bulletin, 56, (1959), 81-105.
- Campbell, David, and Klein, Kenneth. "Job Satisfaction and Vocational Interests." Vocational Guidance Quarterly, 24, (December, 1975), 125-129.
- Centers, Richard, and Cantril, Hadley. "Income Satisfaction and Income Aspiration." Journal of Abnormal Social Psychology, 41, (1946), 64-69.
- Chase, F. S. "Factors for Satisfaction in Teaching." Phi Delta Kappan, 33, (1951), 127-132.
- Cole, R. J. "A Survey of Employee Attitudes." Public Opinion Quarterly, 4, (1940), 497-506.
- Crammer, R. M., and Bock, R. D. "Multivariate Analysis." Review of Educational Research, 36, (1966), 604-617.

- Dalaba, O. G. "Personnel Strategies in the Small Business Organization." Journal of Small Business Management, (July, 1973), 13-16.
- Davis, Ross D. "Small Business in the Next Decade." Advanced Management Journal, 31, 1 (January, 1966), 5-8.
- Dimarco, Nicholas, and Norton, Steven. "Life Style, Organization Structure, Congruity and Job Satisfaction." Personnel Psychology, 27, (Winter, 1974), 581-591.
- Dubin, Robert. "Industrial Worker's World: A Study of the Central Life Interest of Industrial Workers," Social Problems, 3, (January, 1956), 131-142.
- Dubin, Robert, and Champoux, Joseph. "Worker's Central Life Interests and Job Performance." Sociology of Work and Occupations, 1, (August, 1974), 313-326.
- Dubin, Robert; Champoux, Joseph; and Porter, Lyman. "Central Life Interests and Organizational Commitment of Blue-Collar and Clerical Workers." Administrative Science Quarterly, (September, 1975), 411-421.
- Dunham, Randall, and Herman, Jeanne. "Development of a Female Faces Scale for Measuring Job Satisfaction." Journal of Applied Psychology, 60, (1975), 629-631.
- Dunnette, Marion; Campbell, J.; and Hakel, M. "Factors Contributing to the Job Satisfaction in Six Occupational Groups." Organizational Behavior and Human Performance, 2, (1967), 143-174.
- Etzel, M. J., and Walker, B. J. "Effects of Follow-up Procedures on Mail Survey Response Rates." Journal of Applied Psychology, 59, (1974), 219-221.
- Evans, Martin. "Convergent and Discriminant Validities Between the Cornell Job Description Index and a Measure of Goal Attainment." Journal of Applied Psychology, 53, (1969), 102-106.
- Evans, Martin G. "Conceptual and Operational Problems in the Measurement of Various Aspects of Job Satisfaction." Journal of Applied Psychology, 53, (April, 1969), 93-101.
- Ewen, R. B. "Some Determinants of Job Satisfaction: A Study of the Generality of Herzberg's Theory." Journal of Applied Psychology, 48, (1964), 161-163.

- Ewen, R. B. "Weighting Components of Job Satisfaction." Journal of Applied Psychology, 51, (1967), 63-73.
- Ewen, R. B.; Smith, P. C.; Hulin, C. L.; and Locke, E. A. "An Empirical Test of the Herzberg Two-Factor Theory." Journal of Applied Psychology, 50, (1966), 544-550.
- Farris, G. F. "A Predictive Study of Turnover." Personnel Psychology, 24, (1971), 311-328.
- Fournet, Glen; Distefano, M. K.; and Pryer, Margaret. "Job Satisfaction: Issues and Problems." Personnel Psychology, 19, (1966), 165-183.
- Friedlander, F. "Job Characteristics as Satisfiers and Dissatisfiers." Journal of Applied Psychology, 48, (1964), 388-392.
- Gannon, Martin, and Hendrickson, D. Hunt. "Career Orientation and Job Satisfaction Among Working Wives." Journal of Applied Psychology, 57, (1973), 339-340.
- Gibson, J. L., and Klien, S. M. "Employee Attitudes as a Function of Age and Length of Service." Academy of Management Journal, 13, (1970), 411-425.
- Gillett, Bernard, and Schwab, Donald. "Convergent and Discriminant Validities: JDI and MSQ Scales." Journal of Applied Psychology, 60, (1975), 313-317.
- Glenn, Norval D.; Taylor, Patricia A.; and Weaver, Charles N. "Age and Job Satisfaction Among Males and Females: A Multivariate, Multisurvey Study." Journal of Applied Psychology, 62, (1977), 189-193.
- Goodman, Leo A., and Kruskal, William H. "Measures of Association for Cross Classifications." American Statistical Association Journal, (December, 1954), 732-764.
- Goodwin, Leonard. "Occupational Goals and Satisfactions of the American Work Force." Personnel Psychology, 22, (1969), 313-325.
- Graen, George B. "Testing Traditional and Two-Factor Hypotheses Concerned Job Satisfaction." Journal of Applied Psychology, 52, (1968), 366-371.
- Graen, G. B. and Hulin, C. L. Addendum to "An Empirical Investigation of Two Implications of the Two-Factor Theory of Job Satisfaction." Journal of Applied Psychology, 52, (1968), 341-342.

- Gruenfeld, L. W. "A Study of the Motivation of Industrial Supervisors." Personnel Psychology, 15, (1962), 303-314.
- Guttman, N., and Kalish, H. I. "Discriminability and Stimulus Generalization," Journal of Experimental Psychology, 51, (1956), 79-88.
- Hall, Douglas, and Mansfield, Roger. "Relationship of Age and Seniority with Career Variables of Engineers and Scientists." Journal of Applied Psychology, 60, (1975), 201-210.
- Herman, Jeanne, and Hulin, Charles. "Managerial Satisfactions and Organizational Roles: An Investigation of Porter's Need Deficiency Scales." Journal of Applied Psychology, 57, (1973), 118-124.
- Herrick, Neal O. "Who's Unhappy at Work and Why?" Manpower, (January, 1973), 3-7.
- Hersey, R. "Psychology of Workers." Personnel Journal, 14, (1936), 291-296.
- Hoppock, R. "A Twenty-seven Year Follow up on Job Satisfaction of Employed Adults." Personnel Guidance Journal, 38, (1960), 489-492.
- Hoppock, R. "Comparisons of Satisfied and Dissatisfied Teachers." Psychological Bulletin. 12, (1935), 661.
- Hoppock, Robert. "Reminiscences and Comments on Job Satisfaction." Vocational Guidance Quarterly, 24, (December, 1975), 107-114.
- Hotelling, H., and Pabst, M. R. "Rank Correlation and Tests of Significance Involving No Assumption of Normality," Annual of Mathematical Statistics, 7, (1936), 29-43.
- Huck, S. W., and Gleason, E. M. "Using Monetary Inducements to Increase Response Rates from Mailed Surveys: A Replication and Extension of Previous Research." Journal of Applied Psychology, 59, (1974), 222-225.
- Hulin, Charles L. "Job Satisfaction and Turnover in a Female Clerical Population." Journal of Applied Psychology, 50, (1966a), 280-285.
- Hulin, Charles L. "Effects of Community Characteristics on Measures of Job Satisfaction." Journal of Applied Psychology, 50, (1966b), 185-192.

- Hulin, Charles, and Smith, Patricia. "Sex Differences in Job Satisfaction." Journal of Applied Psychology, 48, (1964), 88-92.
- Hulin, Charles, and Smith, Patricia. "A Linear Model of Job Satisfaction." Journal of Applied Psychology, 49, (1965), 209-216.
- Hulin, Charles, and Smith, Patricia. "An Empirical Investigation of the Two Factor Theory of Job Satisfaction." Journal of Applied Psychology, 51, (1967), 396-402.
- Hulin, Charles L. "Effects of Changes in Job Satisfaction Levels on Employee Turnover." Journal of Applied Psychology, 52, (1968), 122-126.
- Hulin, Charles. "Sources of Variation in Job and Life Satisfaction: The Role of Community and Job-Related Variables." Journal of Applied Psychology, 52, (1969), 279-291.
- Hulin, Charles, and Waters, L. "Regression Analysis of Three Variations of the Two-Factor Theory of Job Satisfaction." Journal of Applied Psychology, 55, (1971), 211-216.
- Humphreys, L. G. "The Organization of Human Abilities." American Psychologist, 17, (1962), 475-483.
- Inlow, G. M. "Job Satisfaction of Liberal Arts Graduates." Journal of Applied Psychology, 35, (1951), 175-181.
- Imparato, N. "Relationship between Porter's Need Satisfaction Questionnaire and the Job Description Index." Journal of Applied Psychology, 56, (1972), 397-405.
- Iris, Benjamin, and Barrett, Gerald. "Job and Life Satisfaction and Job Importance." Journal of Applied Psychology, 56, (1972), 301-304.
- Ivancevich, J. M., and Donnelly, J. H. "Job Satisfaction Research: A Management Guide for Practitioners." Personnel Journal, 47, (1968), 172-177.
- Johnson, L., and Johnson, R. "High School Preparation, Occupation, and Job Satisfaction." Vocational Guidance Quarterly, (June, 1972), 287-290.

- Keller, Robert. "Role Conflict and Ambiguity: Correlates with Job Satisfaction and Values." Personnel Psychology, 28, (Spring, 1975), 57-64.
- Kilpatrick, F. P., and Cantril, H. "Self-anchoring Scaling, a Measure of Individual's Unique Reality Worlds." Journal of Individual Psychology, 16, (1960), 158-173.
- Kim, Joy, and Hamner, W. Clay. "Effect of Performance Feedback and Goal Setting on Productivity and Satisfaction in an Organizational Setting." Journal of Applied Psychology, 61, (1976), 46-57.
- Klien, Stuart M., and Maher, John. "Educational Level, Attitudes, and Future Expectations Among First Level Managers." Personnel Psychology, 21, (Spring, 1968), 43-53.
- Klien, S. M. and Maher, J. R. "Educational Level and Satisfaction with Pay." Personnel Psychology, 19, (1966), 195-208.
- Kolstad, Arthur. "Attitudes of Employees and Their Supervisors." Personnel, 20, (1944), 241-250.
- Knowles, M. C. "Personal and Job Factors Affecting Labor Turnover." Personnel Practice Bulletin, 20, (1964), 25-37.
- Korman, Abraham K. "Environmental Ambiguity and Locus of Control as Interactive Influences on Satisfaction." Journal of Applied Psychology, 55, (August, 1971), 339-342.
- Kornhauser, Arthur W., and Sharp, Agens A. "Employee Attitudes: Suggestions from a Study in a Factory." Personnel Journal, 10, (1932), 393-404.
- Kraut, A. I. "Predicting Turnover of Employees from Measured Job Attitudes." Organizational Behavior and Human Performance, 13, (1975), 233-243.
- Kuhlen, R. G. "Needs, Perceived Need Satisfaction Opportunities, and Satisfaction with Occupation." Journal of Applied Psychology, 47, (1963), 56-64.
- Kunin, T. "The Construction of a New Type of Attitude Measure." Personnel Psychology, 8, (1955), 65-77.



- Lahiri, Dilip K., and Choudhuri, Pijush, K. "Perceived Importance of Job Factors by Technical and Nontechnical Employees." Personnel Psychology, 19, (Autumn, 1966), 287-296.
- Landy, F. J., and Bates, F. "The Non-Effect of Three Variables on Mail Survey Response Rates." Journal of Applied Psychology, 58, (1973), 147-148.
- Lindsay, C. A.; Marks, E.; and Gorlow, L. "The Herzberg Theory: A Critique and Reformulation." Journal of Applied Psychology, 51, (1967), 330-339.
- Locke, Edwin A.; Smith, Patricia Cain; Kendall, Lorne M.; Hulin, Charles L.; and Miller, Anne M. "Convergent and Discriminant Validity for Areas and Methods of Rating Job Satisfaction." Journal of Applied Psychology, 48, (1964), 313-319.
- Locke, Edwin. "What is Job Satisfaction?" Organizational Behavior and Human Performance, 4, (1969), 309-336.
- Locke, Edwin. "The Relationship of Task Success to Task Liking and Satisfaction." Journal of Applied Psychology, 49, (1965), 379-385.
- Lodahl, Thomas M., and Kejner, Mathilde. "The Definition and Measurement of Job Involvement." Journal of Applied Psychology, 49, (1965), 24-33.
- McClusky, H. Y. C., and Strayer, Floyd J. "Reactions of Teachers to the Teaching Situation—A Study of Job Satisfaction." Scholastic Review, 48, (1940), 612-623.
- McMurry, Robert. "People Problems: The Bane of the Small Businessmen." Journal of Small Business Management. (July, 1973), 31-33.
- Mannheim, Bilha. "A Comparative Study of Work Centrality, Job Rewards, and Satisfaction: Occupational Groups in Israel." Sociology of Work and Occupations, 2, (February, 1975), 79-102.
- Maurer, John. "Work as Central Life Interest of Industrial Supervisors." Journal of Academy of Management, 11, (September, 1968), 329-339.
- Meltzer, L., and Salter, J. "Organizational Structure and the Performance and Job Satisfaction of Physiologists." American Sociological Review, 27, (June, 1962), 351-362.

- Mikes, P. S., and Hulin, C. L. "Use of Importance as a Weighting Component of Job Satisfaction." Journal of Applied Psychology, 52, (1968), 394-398.
- Miskel, Cecil, and Gerhardt, Ed. "Perceived Bureaucracy, Teacher Conflict, Central Life Interest, Voluntarism, and Job Satisfaction." Journal of Educational Administration, 12, (May, 1974), 84-97.
- Oberg, W. "Age and Achievement and the Technical Man." Personnel Psychology, 13, (1960), 245-259.
- O'Reilly, Charles, and Roberts, Karlene. "Job Satisfaction among Whites and Non-Whites: A Cross-Cultural Approach." Journal of Applied Psychology, 57, (1973), 295-299.
- Orzack, Louis H. "Work as a Central Life Interest of Professionals." Social Problems, (Fall, 1959), 125-132.
- Parker, S. R. "Work and Non-Work in Three Occupations." The Sociological Review, (March, 1965), 65-75.
- Paul, Robert J. "Increasing the Work Efficiency of the Service Employee." Journal of Small Business Management, (October, 1967), 9-15.
- Peck, L. "A Study of the Adjustment Difficulties of a Group of Women Teachers." Journal of Educational Psychology, 27, (1936), 401-416.
- Petty, M. M., and Miles, Robert. "Leader Sex-Role Stereotyping in a Female-Dominated Work Culture." Personnel Psychology, 29, (1976), 393-404.
- Petty, M. M., and Lee, Gordon. "Moderating Effects of Sex of Supervisor and Subordinate on Relationships between Supervisory Behavior and Subordinates Satisfaction." Journal of Applied Psychology, 60, (1975), 624-628.
- Porter, Lyman; Steers, Richard; and Mowday, Richard. "Organizational Commitment, Job Satisfaction, and Turnover among Psychiatric Technicians." Journal of Applied Psychology, 59, (1974), 603-609.
- Porter, Lyman. "A Study of Perceived Need Satisfaction in Bottom and Middle Management Jobs." Journal of Applied Psychology, 45, (1961), 1-10.

- Porter, L. W. "Job Attitude in Management: I. Perceived Deficiencies in Need Fulfillment as a Function of Job Level." Journal of Applied Psychology, 46, (1962), 375-384.
- Porter, Lyman W. "Job Attitudes in Measurement: IV. Perceived Deficiencies in Need Fulfillment as a Function of Size of Company." Journal of Applied Psychology, 47, (1963), 386-397.
- Porter, Lyman, and Lawler, E. "What Job Attitudes Tell About Motivation." Harvard Business Review, 46, (January, 1968a), 118-126.
- Quinn, R. P., and Kahn, R. L. "Organizational Psychology." Annual Review of Psychology, (1967), 437-466.
- Rachman, David J., and Kemp, Linda J. "Are Buyers Happy in Their Jobs?" Journal of Retailing, 40, (Summer, 1964), 1-10.
- Richardson, J. D. "Determining Employee Attitudes: A New Approach." Journal of Small Business Management, (January, 1968), 7-13.
- Rimler, George W., and Humphreys, Neil J. "The 'New Employee' and the Small Firm: Some Insights to Modern Personnel Management." Journal of Small Business Management, 14, (July, 1976), 22-27.
- Roberts, K. H., and Savage, F. "Twenty Questions: Utilizing Job Satisfaction Measures." California Management Review, 15, (Spring, 1973), 82-90.
- Roberts, Karlene; Walter, Gordon; and Miles, Raymond. "A Factor Analytic Study of Job Satisfaction Items Designed to Measure Maslow Need Categories." Personnel Psychology, 24, (1971), 205-220.
- Russell, Kevin J. "Variations in Orientation to Work and Job Satisfaction." Sociology of Work and Occupations, 2, (November, 1975), 299-322.
- Saleh, Shoukry. "A Study of Attitude Change in the Pre-retirement Period." Journal of Applied Psychology, 48, 5, (1964), 310-312.
- Saleh, Shoukry, and Otis, Jay. "Age and Level of Job Satisfaction." Personnel Psychology, (Winter, 1964), 425-430.

- Saleh, Shoukry, and Otis, Jay. "Age and Level of Job Satisfaction." Personnel Psychology, (Winter, 1964), 425-430.
- Scanlan, Burt. "Motivating Employees in the Small Business." Journal of Small Business Management, (July, 1973), 1-6.
- Scanlan, Burt. "Motivating Young Adults in Retailing." Journal of Small Business Management, (April, 1976), 46-54.
- Schneider, Benjamin, and Snyder, Robert. "Some Relationships between Job Satisfaction and Organizational Climate." Journal of Applied Psychology, 60, 3, (1975), 318-328.
- Schuler, Randall. "Role Perceptions, Satisfaction, and Performance: A Partial Reconciliation." Journal of Applied Psychology, 60, 6, (1975), 683-687.
- Schwab, Donald, and Cummings, Larry. "Theories of Performance and Satisfaction: A Review." Industrial Relations, 7, (1970), 408-430.
- Sheppard, D. J. "Relationship of Job Satisfaction to Situational and Personnel Characteristics of Terminating Employees." Personnel Journal, 46, (1967), 565-571.
- Sims, Henry, and Szilagyi, Andres. "Leader Structure and Subordinate Satisfaction for Two Hospital Administrative Levels: A Path Analysis Approach." Journal of Applied Psychology, 60, (1975), 194-197.
- Sinha, D., and Sarma, K. C. "Union Attitudes and Job Satisfaction in Indian Workers." Journal of Applied Psychology, 46, (1962), 247-251.
- Slocum, John W. "Motivation in Managerial Levels; Relationship of Need Satisfaction to Job Performance." Journal of Applied Psychology, 55, (1971), 312-316.
- Smith, Patricia Cain, and Kendall, L. M. "Retranslation of Expectations: An Approach to the Construction of Unambiguous Anchors for Rating Scales." Journal of Applied Psychology, 2, (1936), 149-155.
- Smith, Patricia Cain, Smith, Olin; and Rollo, James. "Factor Structure for Blacks and Whites on the Job Description Index and Its Discrimination of Job

- Satisfaction." Journal of Applied Psychology, 59, (1974), 99-100.
- Soliman, H. M. "Motivation-Hygiene Theory of Job Attitudes: An Empirical Investigation and an Attempt to Reconcile Both the One-and Two-Factor Theories of Job Attitudes." Journal of Applied Psychology, 54, (1970), 452-461.
- Starcewich, M. "The Relationship Between the 'Central Life Interests' of First-Line Managers, Middle Managers, and Professional Employees and Job Characteristics as Satisfiers and Dissatisfiers." Personnel Psychology, 27, (1973), 107-115.
- Stockford, L. O., and Kunze, K. R. "Psychology and the Pay Check." Personnel, 27, (1950), 129-143.
- Stone, Eugene, and Porter, Lyman. "Job Characteristics and Job Attitudes: A Multivariate Study." Journal of Applied Psychology, 60, (1975), 57-64.
- Stott, M. B. "A Preliminary Experiment in the Occupational Analysis of Secretarial Work." Hum. Fact., Lond., 9, (1935), 249-258.
- Sutermmeister, Robert, and Saxberg, Borje. "Human Motivation in the Smaller Enterprise." Journal of Small Business Management, (July, 1973), 7-12.
- Svetlik, Byron; Prien, Erich; and Barrett, Gerald. "Relationships between Job Difficulty, Employee Attitudes Towards His Job, and Supervisory Ratings of the Employee Effectiveness." Journal of Applied Psychology, 48, (1964), 320-324.
- Taylor, Kenneth E., and Weiss, David. "Individual Job Termination from Measured Job Satisfaction and Biographical Data." Journal of Vocational Behavior, 2, (April, 1972), 123-132.
- Telly, C. S.; French, W. L., and Scott, W. G. "The Relationship of Inequity to Turnover among Hourly Workers." Administrative Science Quarterly, 16, (1971), 164-172.
- Triandis, Harry C. "A Critique and Experimental Design for the study of the Relationship between Productivity and Job Satisfaction." Psychology Bulletin. (July, 1959), 309-312.

- Tuckman, Jacob, and Lorge, Irving. "Old People's Appraisal of Adjustment over the Life Span." Journal of Personality, 22, (March, 1954), 417-422.
- Turner, R. H. "Some Aspects of Women's Ambition." American Journal of Sociology, 70, (1964, 271-285.
- Umstot, Denis; Bell, Cecil; and Mitchell, Terence. "Effects of Job Enrichment and Task Goals on Satisfaction and Productivity: Implications for Job Design." Journal of Applied Psychology, 64, (1976), 379-394.
- Veiga, J. F. "Getting the Mail Questionnaire Returned: Some Practical Research Considerations." Journal of Applied Psychology, 59, (1974), 217-218.
- Vollmer, Howard M., and Kinney, Jack A. "Age, Education, and Job Satisfaction." Personnel, 32, (1955), 38-43.
- Wanous, John P. "Analysis of the Job Satisfaction and Performance Relationship." Journal of Applied Psychology, 59, (1974), 139-144.
- Wanous, John, and Lawler, Edward. "Measurement and Meaning of Job Satisfaction." Journal of Applied Psychology, 56, (1972), 95-105.
- Waters, L. K., and Waters, C. W. "Correlates of Job Satisfaction and Job Dissatisfaction among Female Clerical Workers." Journal of Applied Psychology, 52, (1969), 388-391.
- Waters, L. K., and Roach, D. "Relationship between Job Attitudes and Two Forms of Withdrawal from the Work Situation." Journal of Applied Psychology, 55, (1971), 92-94.
- Waters, L. K., and Roach, Darrell. "Job Attitudes as Predictors of Termination and Absenteeism: Consistency Over Time and across Organizational Units." Journal of Applied Psychology, 57, (1973), 341-342.
- Waters, L. K.; Roach, Darrell; and Waters, Carrie. "Estimates of Future Tenure, Satisfaction, and Biographical Variables as Predictors of Termination." Personnel Psychology, 29, (1976), 57-60.
- Weissenberg, P., and Gruenfeld, L. "Relationship between Job Satisfaction and Job Involvement." Journal of Applied Psychology, 52, (1968), 469-473.

- Wernimont, Paul. "A Systems View of Job Satisfaction." Journal of Applied Psychology, 56, (1972), 173-176.
- Wernimont, P. F. "Intrinsic and Extrinsic Factors in Job Satisfaction." Journal of Applied Psychology, 50, (1966), 41-50.
- Wild, R. "Job Needs, Job Satisfaction, and Job Behavior of Women Manual Workers." Journal of Applied Psychology, 54, (1970), 157-162.
- Williams, L. K.; Seybolt, J. W.; and Pinder, C. C. "On Administering Questionnaires in Organizational Settings." Personnel Psychology, 28, (1975), 93-103.
- Wolf, Martin G. "Need Gratification Theory: A Theoretical Reformulation of Job Satisfaction/Dissatisfaction and Job Motivation." Journal of Applied Psychology, 54, (1970), 87-94.
- Wood, Michael T., and Sobel, Robert W. "Effects of Similarity of Leadership Style at Two Levels of Management on the Job Satisfaction of the First Level Manager." Personnel Psychology, 23, (1970), 577-590.
- Worthy, J. C. "Organization Structure and Employee Morale." American Sociological Review, 15, (1950), 169-179.

### Theses

- Abraham, Yohannan T. "Employee Tenure: A Study of Employee Turnover and Retention Involving Employee Background, Job Satisfaction, and Reasons for Staying." Unpublished Ph.D. dissertation, University of Oklahoma, 1976.
- Arnold, DeVere G. "Attitude toward Authority and Sociometric Status as Factors in Productivity and Job Satisfaction." Unpublished Ph.D. dissertation, University of California, Los Angeles, 1951.
- Bowin, Robert B. "Career Anchorage Points and Central Life Interests of Middle-Managers." Unpublished Ph.D. dissertation, University of Georgia, 1970.
- Brown, Darrell R. "Alienation from Work." Unpublished Ph.D. dissertation, University of Oregon, 1968.

- Brown, Stephen M. "An Analysis of the Relationship between Job Satisfaction and Personnel Policy." Unpublished Ph.D. dissertation, University of Georgia, 1974.
- Brown, John L. "The Effects of the Interaction of Individual Differences and Situational Variables on Job Satisfaction." Unpublished Ph.D. dissertation, Cornell University, 1971.
- Cain, Patricia Ann. "Individual Differences in Susceptibility to Monotony." Unpublished Ph.D. dissertation, Cornell University, 1942.
- Corrie, Walter S., Junior. "Work as CLI: A Comparison of the Amana Colony Worker with the Non-Amana Colony Worker in a Given Industrial Setting: Iowa City." Unpublished Ph.D. dissertation, University of Iowa, 1957.
- Endo, Calvin M. "Career Anchorage Points and CLI of Japanese Middle-Managers." Unpublished Ph.D. dissertation, University of Oregon, 1970.
- Faris, John P. "A Study of the Determinants of Job Satisfaction." Unpublished Ph.D. dissertation, George Washington University, 1976.
- Goldman, Daniel R. "Career Anchorage Points and CLI of Middle Managers." Unpublished Ph.D. dissertation, University of Oregon, 1968.
- Hinkley, Nancy. "The Relationship between Sex and Intrinsic Job Satisfaction." Ph.D. dissertation, North Carolina State University, 1975.
- Hulin, Charles. "A Linear Model of Job Satisfaction." Unpublished Ph.D. dissertation, Cornell University, 1963.
- Ima, K. "Central Life Interests of Industrial Workers: A Replication among Lumber Workers." Unpublished Masters thesis, University of Oregon, 1962.
- Kendall, L. M. "Canonical Analysis of Job Satisfaction among Clerical Employees." Unpublished Ph.D. dissertation, Cornell University, 1963.
- Kovach, Kenneth A. "Organization Size as Related to Job-Satisfaction, Absenteeism, and Turnover." Unpublished Ph.D. dissertation, University of Maryland, 1976.



- Latta, L. H. "Occupational Attitudes of Over-the-Road Truck Drivers: An Exploratory Survey." Unpublished Ph.D. dissertation, Michigan State University, 1968.
- Maurer, John G. "The Relationship of Work Role Involvement to Job Characteristics with Higher-Order Need Satisfaction Potential." Unpublished Ph.D. dissertation, Michigan State University, 1967.
- Miniter, John J. "An Analysis of Job Satisfaction Among Public, College or University and Special Librarians." Ph.D. dissertation, North Texas State University, 1975.
- Nelson, Hilding E. "Occupational Self-Images of Teachers: A Study of the Occupational Involvements and Work Role Orientations of Michigan Industrial Education Teachers." Unpublished Ph.D. dissertation, Michigan State University, 1962.
- Ranta, Raymond R. "The Professional Status of the Michigan Cooperative Extension Service." Unpublished Ph.D. dissertation, University of Wisconsin, 1960.
- Simpson, Leo R. "A Multidimensional Empirical Analysis of Leadership in the Small Business Setting." Unpublished Ph.D. dissertation, University of Colorado, 1975.
- Starceovich, Matthew. "An Analysis of the Relationship between the Dual Factor Theory of Motivation and the Central Life Interest Theory of Employees." Unpublished Ph.D. dissertation, University of Oklahoma, 1971.
- Taveggia, Thomas C. "The Necessity of Work: An Empirical Study of British Factory Workers." Unpublished Ph.D. dissertation, University of Oregon, 1971.

#### Government Documents

- President's Task Force on Improving the Prospects of Small Business. Washington, D. C.: U.S. Government Printing Office, March, 1970.
- Small Business Administration. "Fiscal Year 1974 Report." Washington, D. C.: U.S. Government Printing Office, 1974.

Small Business Administration. Public Statement of Loan Policy. Washington, D.C.: Small Business Administration, 1954.

Small Business Administration. "SBA Business Loans." Washington, D.C.: Small Business Administration, 1973.

Small Business Administration. "Small Business Administration Rules and Regulations." Code of Federal Regulations, Section 121.3-10. Office of Federal Register, National Archives and Records Services, General Services Administration. January 1, 1974.

Small Business Administration. "Small Business Administration-What is It, What it Does." Washington, D.C.: Small Business Administration, U.S. Government Printing Office, 1954.

Small Business Administration. "Strengthening Small Business Management." U.S. Government Printing Office, 1972.

U. S. Bureau of Census. Census of Population: 1970. Oklahoma Summary. U.S. Government Printing Office, Washington, D. C.

U. S. Bureau of Census. Census of Population: 1970. Vol 1, Characteristics of the Population, Part 1, United States Summary, Section 2. U.S. Government Printing Office, Washington, D. C.

U. S. Bureau of Census. Enterprise Statistics, 1967-Part I-General Report on Industrial Organizations. Washington, D. C.: U.S. Government Printing Office, 1972, Table 3-1.

U. S. Bureau of the Census. Statistical Abstract of the United States - 1974. 95th Edition. Washington, D. C.: U.S. Government Printing Office, 1974.

U. S. Department of Labor. "Job Satisfaction: Is there a Trend?" Manpower Research Monograph No. 30. Washington, D. C.: U.S. Government Printing Office, 1974.

### Other

American Vocational Association, Committee on Research Publications. "Factors Affecting the Satisfactions of Home Economic Teachers." Washington, D. C.:

AVA, 1948, Research Bulletin No. 3.

- Baldi De Mandilovitch, Martha S., and Quinn, Robert P. "Education and Job Satisfaction: A Questionable Payoff." Paper presented to American Sociological Association, San Francisco, August, 1975.
- Barnowe, J. Thad; Mangione, Thomas; and Quinn, Robert. "An Empirically Derived Model of Job Satisfaction." Department of Health, Education, and Welfare, 1971.
- "Businesses Confident Despite Sales Drop." Oklahoma City Times, 20, March, 1975, p. N. 1.
- Calitz, Coenraad J. "Job Characteristics, Personal Interests, and Response Disposition of Incumbents as Related to Job Satisfaction." ONR Technical Report No. 8, October, 1974.
- Cobb, W., and Quinn, R. "What Workers Want: Factors Analyses of Important Ratings of Job Facets." Unpublished material. Ann Arbor, Michigan: Survey Research Center, 1971, (mineograph).
- Committee for Economic Development. Meeting the Special Problems of Small Business. New York: Committee for Economic Development, 1947.
- Dubin, Robert. "Industrial Research and the Discipline of Sociology." Proceedings of the Eleventh Annual Meeting of the Industrial Relations Research Association. Madison, Wisconsin. Industrial Relations Research Association, 1959.
- Dubin, Robert. "Central Life Interest of German Industrial Workers, Paper Read at the 60th Annual Meeting of the American Sociological Association." Chicago, Illinois, 1965.
- Dubin, Robert. "Sources of Attachment to Work." University of California, Irvine, 1970, (mineograph).
- Dubin, Robert, and Champoux, J. D. "Workers' Central Life Interests and Personality Characteristics." University of California, Irvine, ONR Research Project Technical Report 20, 1973.
- Dubin, Robert; Champoux, J. E.; and Stampfl, J. "Central Life Interest and Job Satisfaction." University of California, Irvine, ONR Research Project Technical Report 17, July, 1973.

- Dubin, R. and Porter, L. W. "Individual-Organization Linkages." Research Project Sponsored by the University of California, Irvine, ONR Project, 1974.
- Dubin, R.; Taveggia, T. C.; and Hedley, R. A. "Central Life Interests: A Culmination." University of California, Irvine, ONR Project Technical Report No. 28, 1975.
- Gerhardt, Ed, and Miskel, Cecil. "Staff Conflict, Organizational Bureaucracy, and Teacher Satisfaction." Department of Health, Education, and Welfare, April, 1972.
- Goldman, Richard. "Career Anchorage Points and Central Life Interest of Middle Managers." Dissertation Abstracts International, (1969), 3677-A (University of Oregon).
- Gould, Bruce. "Review of Air Force Job Satisfaction Research." Paper presented to American Psychological Association, New Orleans, Louisiana, August, 1974.
- Gould, Bruce R. "Reported Job Interest and Perceived Utilization of Talents and Training by Airmen in 97 Career Ladders." Air Force Human Resources Lab, Lackland AFB, Texas, Report No. AFHRL-TR-72-7.
- Hanna, Charles Clifford. "Teaching as a Central Life Interest' of Metropolitan Secondary Teachers." Department of Health, Education, and Welfare, January, 1972.
- Hinkley, Nancy F. "The Relationship between Sex and Intrinsic Job Satisfaction of Adult Educators." Paper presented to Adult Education Research Conference, Toronto, April, 1976.
- Hulin, C. L.; Smith, P. C.; Kendall, L. M.; and Locke, E. A. "Cornell Studies of Job Satisfaction: II. Model and Method of Measuring Job Satisfaction." Ithaca: Cornell University, 1963, (mimeograph).
- Jury, Phillip. "The Relation of Sample Demographic Characteristics to Job Satisfaction." ONR Personnel and Training Research Program Office, 1971.
- Kendall, L. M. "Cornell Studies in Methods of Measuring Job Satisfaction: III. The Relative Validity of Different Methods of Measurement for Predicting Criteria of Satisfaction." Paper read at the American Psychological Association, New York, 1961.

- Kendall, L. M.; Smith, P. C.; Hulin, C. L.; and Locke, E. A. "Cornell Studies of Job Satisfaction: IV. The Relative Validity of the Job Descriptive Index and Other Methods of Measurement of Job Satisfaction." Ithaca: Cornell University, 1962, (mimeograph).
- Kremer, D. H. "A Comparative Study of the CLI of a Group of Workers - Retail Department Store Workers." Paper presented to the Faculty of Commerce and Business Administration, University of British Columbia, 1962.
- Locke, E. A.; Smith, P. C.; Hulin, C. L.; and Kendall, L. M. "Cornell Studies of Job Satisfaction: V. Scale Characteristics of the Job Description Index." Ithaca: Cornell University, 1962, (mimeograph).
- Locke, Edwin A. "What is Job Satisfaction?" Paper presented to American Psychological Association, September, 1968.
- Mann, Floyd C. "A Study of Work Satisfaction as a Function of the Discrepancy between Inferred Aspirations and Achievement." Dissertation Abstracts, 1953, 13, 902.
- Marconi, Kathrine. "Survey of Research on Job Satisfaction." Washington, D. C., The George Washington University Graduate School of Arts and Science, June, 1973.
- Milutinovich, Jugoslav S. "A Stepwise Multidiscriminant Analysis of Job Satisfaction and Group Cohesiveness of Biracial Blue and White Collar Workers." Paper presented to 42nd Annual Meeting of the Eastern Psychological Association, April, 1971.
- Miskel, Cecil G.; Glasnapp, Douglas; and Hatley, Richard. "Public School Teachers' Work Motivation, Organizational Incentives, Job Satisfaction, and Primary Life Interest." Office of Education, Department of Health, Education, and Welfare, June, 1972.
- Muhammed, J. "Organizational Attachment." Unsponsored Research Project, University of British Columbia, 1973.
- Neilson, William R. "A Study of the 'Painfully Unemployed'." University of Pittsburgh, 1951, (mimeograph).
- Porter, Lyman W., and Dubin, Robert. "The Organization and the Person." University of California, Irvine. ONR Final Project Report N3 151-315, July, 1975.

- Smith, Patricia C. "Cornell Studies of Job Satisfaction: I. Strategy for the Development of a General Theory of Job Satisfaction." Ithaca: Cornell University, 1963, (mimeograph).
- Stone, Eugene F., and Porter, Lyman W. "Job Scope and Job Satisfaction: A Study of Urban Workers. ONR Scientific Report 22, November, 1973.
- Taylor, K., and Weiss, D. "Prediction of Individual Job Turnover from Measured Job Satisfaction." Research Rep. 30, Work Adjustment Project, University of Minnesota, October, 1969.
- Tuttle, T. C., and Hazel, J. T. "Review and Implications of Job Satisfaction and Work Motivation Theories for Air Force Research." AFHRL-TR-73-56. Lackland AFB, Texas: Occupational Research Division, Air Force Human Relations Laboratory (AFSC), January, 1974.
- Vaughn, William, and Dunn, J. D. "An Investigation into the Relationship between Education and Job Satisfaction in an On-Going Organization." Denton, Texas: North Texas State University, 1972a.
- Vaughn, William J., and Dunn, J. D. "A Conceptual Framework for Monitoring Job Satisfactions in On-Going Organizations." Department of Health, Education, and Welfare, 1972b.